The Builder.

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Designs for the Proposed Law Courts.

THE Designs for the proposed Law Courts, submitted in competition, are admirably hung in the temporary building erected for the purpose in New-square, Lincoln's-inn. The competitors are eleven in number, it will be remembered; namely, Mr. Abraham, Mr. E. M. Barry, Mr. Raphael Brandon, Mr. Burges, Mr. Deane, Mr. Garling, Mr. Lockwood, Mr. Seddon, Mr. G. G. Scott, Mr. Street, and Mr. Waterhouse. The drawings of each competitor are hung in a separate chamber, so to speak, formed right and left of a central pathway, and lighted from the top. Great praise is due to those who have the conduct of this competition for the endeavours so far that have been made, with a view to obtain the best possible design for the contemplated buildings. The amount of information afforded, and the completeness and clearness of the schedules furnished, are remarkable, and do great credit to those who constructed them. An impossible perfection is shadowed out by them, and to this the competitors have had to work up with such success as each could master.

The Commissioners have further shown their right appreciation of the difficulty there is in coming to a proper decision in such a matter by granting Mr. Burnet, the architectural clerk, a large staff of assistants for several weeks, with the further aid of Mr. G. Pownall and Mr. John Shaw, to ascertain how far the various points of the instructions have been attended to, especially as to the sizes of rooms and courts, provided by each architect, and as to the comparative merits of the plans with reference to other matters ascertainable by calculation, such as light, quiet, and facility of access. There will be another examination by Officers of the Law to show the Commissioners how far and how well each scheme will supply the special wants of each court and department. Mr. Pownall and Mr. Shaw will doubtless give their opinion too as architects; and then, with these statements before them, the appointed Judges of Designs (the First Commissioner of Works, chairman; the Chancellor of the Exchequer, the Lord Chief Justice of England, the Attorney-General, and Mr. William Stirling, M.P.) will proceed to make their selection.

There are circumstances connected with the early arrangements for the competition that, but for the evidence before us of a strong desire to do right, would lead us to enforce the supplication for impartial consideration, made by one of the competitors.

It is no boy's task, as he says, which is to be dealt with as a mere trial of strength. It is, probably, the greatest and most arduous labour ever imposed upon the members of a very laborious profession; it is a work which has employed the best thoughts, and time, and aspirations of the competitors, for three-quarters of a year. It is no academic competitive examination, but a most serious work of real life,—a herculean labour for a great practical and national object. Do not, then, we beg of you in all respectful earnestness, cast aside these labours on any trifling grounds, for they are the best efforts of carefully-selected minds, and the result of long, and anxious, and painful endeavours, stimulated by an ever-present sense of the immense importance of the object, and undertaken at a vast sacrifice of other professional demands. Above all, let us beg that the judges will rigorously impose upon themselves the rule which judges urge upon juries, to dismiss *in limine* from their minds all that they have previously heard or felt on the subject, for they have a work to perform in which justice to a number of *selected* and *invited* professors of a great and noble art is united with a most onerous and reponsible duty to the nation for whose use this mighty edifice is to be reared.

With perhaps one exception, the competitors have set forth their designs in drawings of great excellence and beauty; some of the drawings, indeed, are exquisite, and by means of writing around them, called for by the Commissioners, the levels of the various floors, the extent of the departments, the purposes of the different rooms, and the general scope of each design, are made remarkably clear. All the designs are Gothic in style, only one competitor, Mr. Garling, sending an alternative design Italian in character. This gentleman, by the way, who avoids a central hall, has materially lessened his chance of success by covering the whole site, as Mr. Burges in a less degree has done by giving his building a military aspect instead of civil; and Mr. Seddon by a tower, with fourteen ranges of windows, which has little consonance with the London of the nineteenth century. His front next the Strand is very picturesque and clever. Mr. Deane's weak point, since we have fallen into this line, and with reference to appearance only, is the fact that the design takes the shape of several buildings which may or may not belong to each other. It is elegant, nevertheless. The first consideration for the judges is plain,—who best fulfils by plan and arrangements their multifarious requirements. Still the building must be a public monument, and the art-question must have full weight in making the selection. No matter how good, for example, might be the plan submitted by Mr. Abraham, to whom the other competitors are under obligations, the selection of elevations such as he has put to it is out of the question.

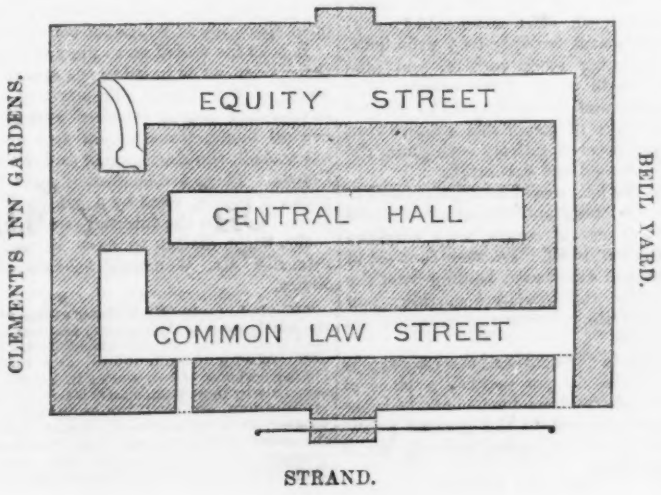
Mr. Waterhouse, as was to be expected, has submitted a very complete scheme, marked by thorough knowledge of the subject, and set forth in thirty good drawings. Dividing the buildings into Courts (with rooms immediately contiguous) and Offices; the first, as having the greater claim to quiet and the advantage of a central position, he masses together in two internal lines of building running east and west, with a long internal area or open street, 53 ft. wide, on each of their outer sides, and divided by a large covered hall, from which access is obtained on the one side (the north) to the Courts of Equity, on the other (the south) to those of Common Law. The offices he places in the external ranges of building which front respectively to the Strand, Carey-street, Bell-yard, and Clement's Inn, so as to form a complete barrier between all noise from the external traffic and the courts which they shelter.

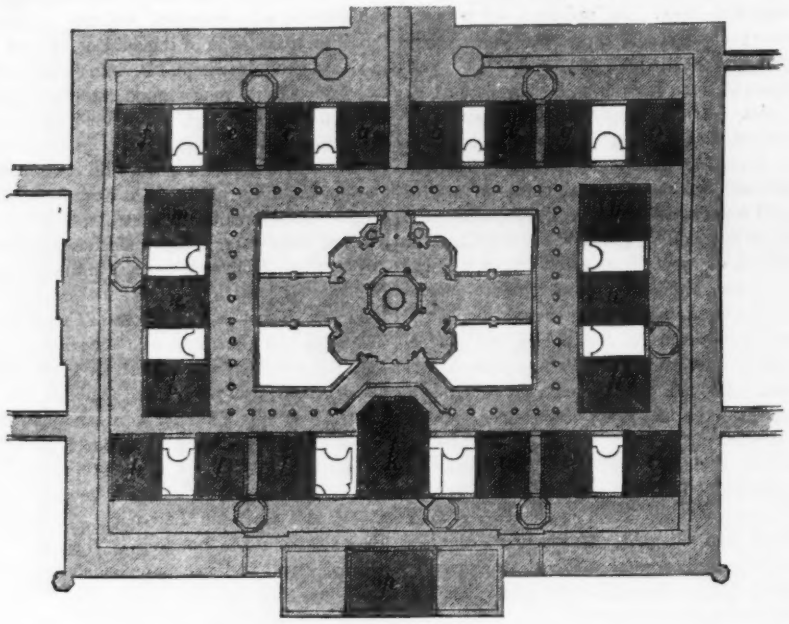
By these two streets, which he calls Equity-street and Common Law-street, he lights the rooms within the building. They are on the Strand level, and are approached by carriage-archways through the outer Strand range of offices. The accompanying plan shows broadly the arrangement adopted.

As to the best arrangement for the Courts, both *inter se* and with reference to their position in the building generally, he gives the following reasons for placing them, with little exception, in two parallel lines divided only by a central hall.

1. They are thus brought as closely together as possible.
2. The greatest possible simplicity of arrangement is thus obtained.
3. The Central Hall affords for barristers, solicitors, and, in fact, for all who are within the building on business, a place of meeting from which each of the Courts is immediately accessible.
4. The arrangement is one which secures a certain amount of elasticity for any future modification in the special purposes to which each individual Court is applied. In fact, it prevents any group of courts becoming so crystallised, if I may so speak, as to make such modification difficult or impossible; *e.g.*, if the Courts of Equity should hereafter increase in number, the Admiralty Court might be converted into a Court of Equity, and the Court shown in the plans under the former name be removed elsewhere, without any detriment to the general scheme.
5. A proximity is thus secured between the Courts of Law and Equity which may hereafter be turned to account in the event of any further fusion between their respective systems of procedure, or between the Equity and Common Law Bars.

Besides the main entrance,—which is in the centre of the Strand front,—there are two archways on the south side, each wide enough for two carriages, through the Strand range of offices into "Common-Law-street." One of these opens from Pickett-street; the other is situated immediately to the west of New Temple Bridge, and by this access is obtained not only to the eastern end of "Common-Law-street," but also by means of an archway of equal width under the offices to the east of the court blocks into the eastern end of "Equity-street," which is, for carriages, a *cul de sac*. The central portion of the archway just alluded to is lighted by





four areas open to the sky. A broad pathway is provided for foot-passengers at the side of the carriage-way.

In addition to the two principal entrances in the Strand and Carey-street some twenty-five subordinate entrances have been provided at various points in the external and internal streets. These give access either to particular portions of the building, the various departments and offices, or are intended for particular classes of persons. Thus, at the north-west corner, there is a private entrance for the judges' carriages, giving an access to the judges' private corridor by means of a carriage-way up to its level. At the north and south, at the extreme eastern end of the building, at a level of 17 ft. 6 in. above Carey-street, are entrances intended for the exclusive use of the bar and attorneys, who would thus approach the apartments appropriated to them after passing along the bridges provided for their use from Lincoln's Inn and the Temple.

The entire width of the court block between "Equity-street" and "Common-Law-street" is traversed on a level with those streets by two halls in a line with each other, which, in fact, would be but one, were it not for the central hall above and between them. They are each 64 ft. wide, with an average length of 83 ft., and a height of 32 ft. The width of each is divided into a nave, so to speak, 32 ft. wide, and side aisles. Over the aisles are galleries on a level with the central hall, which are approached at their north and south ends by bridges across the internal streets opposite the main entrances in Carey-street and the Strand. The transverse halls themselves are entered by doorways in the internal streets immediately beneath these bridges. The space between these halls is open to the roof of the central hall above, excepting where crossed by the bridge uniting the two halves of the latter.

The great central hall covers an area of 478 ft. by 60 ft., and is 90 ft. high to the apex of the roof. It is divided longitudinally as to its floor space into two nearly equal portions by bridges which unite the corridors and offices on either side of the court level. The roof would be supported by ornamental wrought-iron principals, resting on projecting stone corbels, and buttressed by the main walls of the courts. The designer proposes that the roof should be divided into alternate bays of larger and smaller size, the larger being covered entirely with glass, the smaller being boarded and decorated.

The sides of the hall would be appropriated to three stories of witness and consultation rooms attached to the several courts, with windows looking into the hall itself. Between each set of these would ascend a staircase, leading from the floor of the hall to the barristers' corridor, and giving access to the witness and consultation rooms themselves.

The great hall in the centre of the building is intended for a *salle des pas perdus*; a place of rendezvous for all who have business to transact in the courts, as opposed to the general public who come only to see and hear, and who would have no access to it.

The style adopted is that of the thirteenth century. Admitting that to be the style in which a building should be erected in London in the nineteenth century the building is effectively composed. The mass includes two lofty towers for the deposit, one (284 ft. high) of Wills, and the other (354 ft. high) of Registered Copies. A clock tower rises from the Strand front, and there are two other towers appropriated to smoke and ventilation. Pricing the main building at 1s. 1d. per cube foot (obtained by adding 40 per cent. to the cost of the Manchester Assize Courts, which was 9½d.), and the towers at 1s. 9d. per cube foot, we get 1,339,328*l.*; or, with Temple Bar, roads, approaches, and so on, 1,419,842*l.*

The edifice, it may be added, contains 1,141 apartments, as required by the instructions, and 163 extra rooms to meet future requirements.

The sum originally suggested to the competitors was 750,000*l.*

Mr. Scott has sent the largest number of drawings of any competitor, and a very fine set they are. He is greatly impressed with the magnitude of the task:—

"On first entering upon the consideration of the subject, two impressions force themselves upon the mind:—the nobleness of the project, and the vastness of the labour of carrying it out, even upon paper; and, strong as the first impression must be of the labour to be undertaken, I think all of us must have found it so much greater in reality than in idea, that, had we on first entering upon it realized its magnitude, we might well have shrunk back from the task: indeed, it is only the grandeur of the undertaking which has enabled one to face out the almost incredible labour of the design. Others may possibly have greater facility of arrangement than myself, though I have probably had as much experience in arranging large buildings as any man; but I may say that to me the labour has been such that, though I embarked on it vigorously on the very day after I agreed to join the competition, I have ever since been hard at work upon it, often giving to it eight hours or more a day for many days together."

Broadly speaking, Mr. Scott has adopted Mr. Abraham's early plan; that is to say, an outer shell of buildings containing the departments less connected with the courts, an internal street within this shell, and a central block containing the courts with their appurtenances, and such departments as are more directly connected with them; this block including in its centre an open space round which the courts are arranged.

It is so far varied as to limit the outer shell to three sides, so as to bring the central block forward to the front. Twenty-two out of the twenty-four courts required are placed in the central block, throwing off two only into the outer shell, the Matrimonial and the Bankruptcy Courts. These are connected with the general group of courts, each by a bridge ("perhaps of sighs") across the internal street.

Mr. Scott claims to have carried out in its integrity Mr. Webster's scheme of *concentric circles*.

"My *circles* (to use Mr. Webster's term, and considering the middle space as their centre) are, first, a spacious and (as I should wish) magnificent ambulatory of nearly 30 ft. wide, running round a central area (about 200 ft. by 116 ft.). This is of two stories in height, the one being used only by those immediately interested in the business of the courts, the other one by them and by the public jointly. Round this comes the second *circle*, consisting of the courts themselves, with their intervening areas and passages; external to this is the third *circle*, consisting of the judges' rooms and those for the juries, with the necessary staircases and appurtenances; next to these is a corridor all round, for the bar and attorneys, beyond and opening out of which are the rooms appropriated to their use, and to that of the various officials, &c., connected with the courts."

The accompanying plan shows the position of the twenty-one courts which surround the main ambulatory. We can specify only some of them. (*a*) and (*b*) mark the Courts of the Lord Chancellor and the Master of the Rolls; (*c*) is the Lords Justices' Court, and (*d*) Vice-Chancellor Kindersley's Court; (*e*) and (*f*) are the other Vice-Chancellors' Courts. The three Courts of Queen's Bench (*hhh*) are to the east of the central area. On the eastern part of south side are the three Courts of Common Pleas (*iii*); and on the western part the three Courts of Exchequer (*jjj*). The centre of the south side is given to the spare court (*k*), which exceeds all the others in dimensions, and which Mr. Scott calls the "Sensational" Court. The three courts at the western end of the area are severally the Exchequer Chamber (*l*), the Admiralty Court (*m*), and the extra Ecclesiastical Court (*n*).

It must be remembered as to the designs generally that the site, viewed roughly, may be said to be level from east to west, but to rise some 17 ft. from south to north—the lower line of boundary facing the Strand, the upper one facing Carey-street; and the sloping-end boundaries facing severally Bell-yard and Clement's-inn. The leading fact to which this gives rise is that the north frontage is an entire story above that of the south, so that what is ground-floor on the north is first-floor on the south, and what is ground-floor on the south is basement on the north.

Mr. Scott gets between the level of the Strand and the level of the floor of the courts a lofty story for public offices, and regards this as a reason why, without serious disadvantage, there cannot be a central hall in the sense in which that term may be most naturally understood; that is to say, as a hall from which the courts would directly open, like Westminster Hall, or that designed by Sir Charles Barry for the Lincoln's-inn-fields site. "This would be only practicable," he thinks, "were the courts on the ground-floor; for, if adopted in the case of elevated courts, it is clear that little or no light could be given to the space below such hall, or to the lower stories of the parts surrounding it." It is this which has led him to give a double width to his ambulatory, that it may take the place of such a central hall. He adds to it, however, a central hall in the middle of the open area. In the centre of the central hall rises the great staircase. The hall is a large octagon, overshadowed by a magnificent dome. The court level is reached from the Carey-street entrance, without the aid of the central staircase, by a direct corridor.

In adopting the Gothic style, Mr. Scott claims it as affording the greatest facilities for the developments suggested by modern requirements, modern materials, and modern modes of construction, and in many parts of his design he has evidently worked in this spirit. An immense amount of painted and sculptured decoration is shown, though not insisted on. The inner portico of the Strand entrance would be a fine work; so also the interior of the dome. A massive tower for records is a prominent feature.

The cubical contents of the building at 1s. per foot cube give 1,253,626*l.*, exclusive of figure sculpture and figure painting. 1s. per foot is taken on the ground that the Foreign Office is being built at 1s. 0¾d. per foot, and that the stone fronts there bear a larger proportion to the whole mass than would be the case at the Law Courts. The contract for Glasgow University, a less expensively-finished building, gives 7¾d. per foot cube: both materials and labour, however, are cheaper there than in London. We must break off for the present.

THE DESIGNS FOR THE NEW NATIONAL GALLERY.*

Examination of competition-designs, on the part of the public, the judges in the case, or the profession itself, has hitherto been, from various causes, quite out of proportion with the efforts of competitors, and with the benefit capable of being realized in whatever there might be of suggestion in the designs, or of full response to the appeal of the promoters of the competition. Advantage accruing, whether to either of the parties, or to the art and science of architecture, has been but trifling: designs on which much

* See pp. 23, 40, & 56, *ante*.

labour and money-outlay had been expended, have gone back to their authors, to be thenceforward lost to sight, having left no result whatever influenced by their preparation. Accumulated observation of the facts has led us, therefore, on the present occasion of the competition of designs for the National Gallery, to attempt to supply what has not been attained even in the exhibition opened in the Royal Gallery of the Palace at Westminster, and to leave on record particulars that might be valuable, and might otherwise be lost. Our readers must be content with the speed at which we acquit ourselves of our duty.

We have, so far, noticed the works of four of the competitors, comprising about ten different designs. Mr. Murray's designs, which come next, are classed by him as three in number; but with the different alternatives of plan or decorative treatment, we should count them as five or six. Of the three, his "Design No. 1" would involve an extensive remodelling of the existing building, together with the erection of new galleries on the ground to the north-east: "No. 2" is for an entirely new building "in the Greek style;" and "No. 3" is for a new building, "Italian in style." The treatment of the two latter designs so entirely comprises the ground occupied by the barracks, that a western front, forming one side of a new street from Pall Mall East, is shown in each of the views. St. Martin's-street would be widened, and prolonged to Leicester-square; whilst the College of Physicians would form an effective termination, southward, to the new opening. Mr. Murray has chosen to design each of his buildings "in what is commonly termed 'Classic,'" because of the character of the buildings of the locality.

As regards the first design: from the present building would be removed the dome, and the lanterns or "pepper-boxes"; the portico, which Mr. Murray regards as too small for its situation, would be taken down; a larger portico would be erected; and a colonnade would be added to each wing, for the greater portion of its length—using the displaced columns, and leaving those of the side-porticoes. The central intercolumn of these last being wider than the side-intercolumns, whilst a similar arrangement is that of the pilasters of the other projections from the wing, we doubt whether the effect would be good. The case of a long colonnade is different to that of the Vitruvian eustyle portico; as to which even, we are not sure that the effect was quite pleasing. Above and in the rear of the central portico, would be a square attic, terminated by a cornice and antefixæ, and groups at the angles: this would form the upper portion of a hall for sculpture, of 100 ft. in length by 65 ft. in width. The terminations of the present side-porticoes would remain much as they are: but in place of each lantern on the wings, the mass of the projection on plan would be carried up as an attic, and terminated by a balustrade: four statues would be placed over the columns; and in the centre would be a panel for sculpture. But to this arrangement there is an alternative, comprising a much larger pavilion-mass projecting from the wing. The staircases would be altered; as would the last new gallery: but the other galleries would remain. The ground would be enclosed with, in place of the present railing, a balustrade; to which would be added, lamps, and steps at the ends. The terrace and steps of the Square would remain as at present. The arrangement that the author would recommend for the new portion of the ground, is not quite clear; but we may take it to be as shown in "Design No. 2"; excepting that "Design No. 1" has at the eastern end of the ground, a large semicircular double-columned portico, entirely open, or without wall at the back of its columns, other than the wall of the end of the building on the line of its diameter; whilst the other design has an ordinary portico of six columns. In each design a considerable portion of this end-ground is given up to the street. According to one arrangement, the lines of the eastern frontage would be at right angles with the chief front; whilst, parallel with the eastern front, would be galleries, covering, with the galleries parallel with Hemming's-row, the entire ground, or leaving only a very small court between the present galleries and the ends of the new ones, and allowing of mere air-shafts at the other ends. The ground-floor would be used chiefly for storeage. There would be staircases in the centre of each of the three fronts. The northern galleries, of 50 ft. in width,—like the others, to which we have referred, of which the width varies from 50 ft. to 22 ft.,—would be top-lighted, and would have rooms alongside of them, which might be lighted from the street. A design, which is an alternative to "No. 1," has the line of the end of the building, and other lines, askew, instead of at right angles with the front,—the hexastyle portico taking the place of the semicircular; whilst in place of what would be the acute angle, north-east, there is a quadrant with columns. In the latter part of the plan, a circular guard-room is shown. In this design there is an attic like that over the portico in the other case, but developed to occupy a large portion of the entire area of plan.

"Design "No. 2" is columnar; but it is in other respects different to "No. 1;" though it resembles the alternative of the latter design in those features of plan that we have particularized. Otherwise the plan in "No. 2" may be described as having the whole range of buildings, including the site of the barracks, grouped about two courtyards, of which the smaller measures 95 ft. by 85 ft. The main entrance, in the centre of the Trafalgar-square frontage, is under a grand portico of fourteen columns in the front, and of six inner columns: behind this is a space of 100 ft. by 27 ft.; beyond which again are a vestibule and staircases. The landing of these latter, with the entire space, is open to the portico,—the arrangement resembling as nearly as possible that of the portico and staircases of the Museum by Schinkel, at Berlin. It is an arrangement that is of doubtful propriety,—whether for the climate of the capital on the banks of the Thames, or for that of the capital on those of the Spree. The resemblance to the Berlin structure is continued in the portico; which is without pediment. The space over the staircase-hall and entrance-hall is carried up as an attic; but in this, the resemblance to the Berlin structure is not so great as in the attic of design No. 1. The space is arched over, and hypæthral-lighted; and the external framework of this covering is a temple-like structure, with ten square antæ in front, in place of columns, and with a sculptured pediment. The order of the principal portico of the building is continued, with three-quarter columns, on a rusticated stylobate; and the angles of the building take the quadrant-form on plan. The ground-floor windows have pediments; and the wall over them is enriched with sculpture. The portico of the eastern front has a pediment. The external walls generally are surmounted by a well-designed attic, with dwarf-piers, panels, and statues. The ground-floor is devoted almost exclusively to sculpture. If sculpture be to be provided for, probably that would be the best appropriation of the ground-floor, as compared with provision there for the National Portrait Gallery along with the Turner and other drawings. Sculpture is seen to more advantage by a side-light than a top-light. In Mr. Murray's design, the larger galleries, 50 ft. in width, for sculpture, are lighted by large windows from the courts. The north-east and south-east angles of the building are occupied by the residence; the rooms of which are joined by a corridor across the space in the centre of the east front, where one of the staircases is. Although the competitor has considered that the instructions required him to provide staircases at the north and east, he does not advise that there should be so many altogether as he has shown. On the upper floor are the galleries for paintings. The grand-staircase would lead to a vestibule, 103 ft. by 20 ft., in the Trafalgar-square front; whence on three sides galleries of 50 ft. width would open; and from these last would open galleries of 25 ft. Top-lighting is recommended for the galleries along the north, as for all the others. The elevations towards the courts have a certain decorative character, as they should have if they can be seen from windows.

The design "No. 3" is in plan a modification of "No. 2;" but in decorative treatment it is very different. The *wide* sculpture-galleries are made external; whilst the *narrow* ones are lighted from the courts. The characteristic feature of the front, the staircase open to the air, is suppressed; and in place of it there is an entrance-hall, 97 ft. by 50 ft., over which the picture-galleries run in an unbroken line; whilst the staircase itself is seen, on entering, beyond the entrance-hall, and through a perspective of columns. The narrow picture-galleries would be side-lighted. The Trafalgar-square front would display two stories on a rusticated podium; the ground-story would have rusticated arch-headed windows, and the upper story a Corinthian pilastrade, niches, and statues. In the middle of the front, the drawing shows a double-storied portico of columns, coupled in the thickness,—the order below being Roman Doric, with rusticated shafts, and that above, Corinthian,—and the lower portico being approached by side flights of steps, and the upper one crowned at the top by a balustrade and statues. This is not the sort of design that we wish to see carried into effect. If a building that is new be an art-work, there must be novelty in it. Such element, required, need be but small: indeed, in presence of courtless attempts that realize no more than novelty, and with recollection of the difficulty of combining novelty with taste, we would restrain rather than urge the flight after novelty. But some novelty is required. All which we have often said. Mr. Murray estimates the cost of his design "No. 1," or including the remodelling of the present building, at 210,000*l*. But leaving the present structure as it is, and building upon the north-eastern ground only, he estimates that the cost would be 161,000*l*. His estimate for the entire design "No. 2" is 326,000*l*.; whilst "No. 3" would be 330,000*l*.

Mr. E. M. Barry's designs are marked respectively A, B, and C; but including variations of plan, they may be reckoned as more than three in number. "Design C" is that which deals mainly with the new ground, and makes only alterations in the present structure. "A" and "B" are designs, not very dissimilar to one another, for an entirely new structure; and both of these deal with the ground, entire, and inclusive of the site of the barracks. In all the designs, the principle of distribution of the galleries and rooms occupying the north-eastern ground is the same. In all, the eastern boundary of the plan is at right angles with the front; and in all, the present arrangement of the terrace and steps of the Square is retained. In designs "A" and "B," there is a frontage to a new street at the west.

In "Design C," the dome and the pediment to the portico are removed. The three principal rooms of each end of the building, for pictures, are retained,—as are also the "octagon-room" of the Academy, and the room in the projection from the front corresponding with that in which the octagon-room is. The lanterns on these projections are removed. In place of the pediment, a raised attic is shown, with balustrade and statues. This feature forms the upper portion of a large staircase-hall, which has galleries and columns on the four sides. The projections from the wings are terminated by attics similar in treatment to the large attic. In planning the buildings for the added ground, Mr. Barry has not availed himself of the ground-floor for purposes of exhibition, unless exceptionally, as for the Turner drawings. In his opinion, picture-galleries cannot be considered satisfactory without top-light; and he believes that, though a large additional wall-space would be gained should ground-floor galleries be considered admissible, a larger wall-space is provided by any of his plans than would be likely to be required for many generations. Confining our description, first, to the gallery-floor, and as regards the new ground: the plan comprises a group of buildings consisting of galleries surrounding a quadrangle, in the centre of which is another group, and of a range of buildings in the rear, or following the line of Hemming's-row. The group within the quadrangle is square on plan, but having the angles canted off: galleries of 22 ft. in width form the outer circuit; whilst the four angles are planned as octagons. In the centre of this group is a space of 56 ft. square, which is entered on its four sides by short passages. Spaces of the form of the letter L are left at the angles, between the 22 ft. galleries and the 56 ft. square space, for the object of light to the rooms below. The central space is planned somewhat after the model of the so-called *landscape-gallery* at Munich, of which the competitor gives a section. The principle is the same as that of the arrangement advocated by Mr. Cockerell,—with only this difference, that the suspended ceiling is brought much lower in the Munich example, as well as in Mr. Barry's design, than it would be according to Mr. Cockerell's suggestion, which greatly resembles what was carried into effect some years ago by Mr. F. E. H. Fowler in the gallery of the Society of British Artists. Mr. Barry, however, like Mr. Cockerell, and for much the same reasons, would relieve the heaviness of the *plafond*, by openings or coffers, which would be glazed. The method is "suggested" by Mr. Barry "as being very suitable for landscape and subject

pictures of moderate size;" but we should say, that if the principle be the right one for pictures of any kind, it can have no special suitableness for either landscapes generally, or works of small size. As to the latter, the observer would necessarily approach so near to the work, that the source of light would no longer be concealed: though whether this would affect the principle, we must leave others to decide. We believe that, as might be supposed, the proposal does not find favour with those of the judges who have paid most attention to the arrangement of galleries. It should, however, be well considered. But if the principle be correct for one gallery, it would seem to be so for others. The principal galleries in Mr. Barry's plan are respectively 50 ft., 45 ft., and 42 ft. in width. He does not omit to state that the prescription of the 50 ft. has exercised an important influence on his plan, and on the extent of accommodation he has been able to provide. Whilst expressing his preference for top-lighting, he has provided a few side-lighted galleries for cabinet-pictures. In the floors of each of the large galleries are openings for light to rooms below. This arrangement is one that, having regard to chances of fire, would have to be well considered before adoption. It is a leading feature in a design that we have yet to notice. The ground-floor in Mr. Barry's design is planned so as to be capable of adaptation to different requirements. There are a staircase and a covered porch on the Hemming's-row side; and there is a large carriage-porch, with coupled columns as the main feature, to an exit-way that is at the eastern end of the building. The author thinks it right to state that he has prepared his "Design C" in obedience to the "Instructions," but that he cannot recommend it as "an adequate or satisfactory way of supplying the want" of a National Gallery.

In his designs "A" and "B," Mr. Barry has allowed himself more liberty; and, as we have said, he has dealt not only with the site of the present building, and with the north-eastern ground, but with the site of the barracks. He had some difficulty in understanding the condition that the front was "not to obscure the view of the portico of St. Martin's Church, from Pall-Mall East, or from any part of Trafalgar-square," since the present building obscures the view to a certain extent. He has therefore shown alternative designs, so far as the lines of front are concerned,—involving of course in one of the designs, diminished convenience. The chief feature of the building viewed from the Square, would be a large dome, in which the newspapers have discovered too much resemblance to that of St. Paul's, and which certainly resembles that fine model in having columns about the tambour. This feature is borne upon a large square mass which has turrets at the four angles, forms the centre of the front, and projects in part as a portico or loggia of Corinthian columns carried on rusticated arches. The columns, eight in front, and eight internal, are placed between piers that carry two of the turrets. Besides the central dome, there are two other domes to the front, that is to the ends, where the angles are massed square on plan. These smaller domes are without the feature of a very lofty tambour. Each of the other two angles of the entire building would have a dome similar to those last mentioned; though the acute-angled form of the ground to the north-west, would throw the dome there out of what would be its proper place, symmetry being considered. Opposite the entrance, and beyond the space in the plan covered by the dome, is a grand staircase and sculpture-gallery, with a vaulted ceiling carried by columns which are at the sides, and which separate the side-galleries from a central straight flight of steps, broken by landings. The staircase is lighted through coffers and lunettes. In the two recesses of the front, or between the masses of the wings and centre, in each case, is a loggia of balustraded arches, having Ionic columns on the piers. It is lower than the adjoining Corinthian order; and forms a covered way parallel with the chief galleries of the front. There is a portico to each of the end-fronts,—the columns being on the upper story. One of these is not sufficiently different from the portico of Covent Garden Theatre. The design "B" has quadrant-corners to the building: the other design, "A," has re-entering angles to the same parts of the plan, or in place of the quadrants. This appears to be the chief difference between "A" and "B." There is, however, a plan showing an arrangement of the galleries with an extra number of cross-walls for additional hanging-space. Mr. Barry observes that this increase would be attained at a certain "sacrifice of grand architectural effect." There appears to be an opinion, however, that the longer a gallery, the more monotonous would it be. The truth is, that lengths of rooms, or galleries, should be varied, and the architectural features also,—though these last are necessarily confined to the ceilings, for the most part. The difference in the levels of the ground, which, according to Mr. Barry, is about 13 ft., led him to the arrangement of the ground-story, or, it would seem, chiefly to give height. In the space under the dome, he would place allegorical groups, and statues of the old masters. The staircase and its galleries he would reserve for statues of deceased British architects, sculptors, and painters; and by such arrangement he thinks "the public would be led to form correct ideas as to the past history of art," and that "honours would thus be paid to British artists, similar in degree to those so often accorded to their foreign brethren, although not hitherto customary to any great degree in their own country." The best features of these designs, "A" and "B," decoratively, appear to us those of the interior, as in the treatment of the points of intersection or meeting of the lines of galleries on the plan, and in the hypæthral lighting of the staircase and its side-galleries. The design "C" is estimated to cost 220,000*l.*: the estimate for "A" is 460,000*l.*, excluding the portion of building in the site of the barracks and barrack-yard; and that for "B" is 480,000*l.* In a concluding paragraph of the paper accompanying his designs, Mr. Barry alludes to steps that should be taken to obtain a satisfactory selection from designs proposed. He considers that "a small body of judges, however eminent for their ability and architectural knowledge, would be liable to be led astray by strong prepossessions in favour of a particular style or mode of treatment:" he rightly adds,—"The consideration of such a subject, and even the power thoroughly to understand the various plans and sections, require considerable professional qualifications," &c.; and he suggests the Royal Academy and the Institute of Architects as "suitable bodies to be requested to co-operate with the Government, and such lay judges as may be appointed."

We are now obliged to depart from the order in which we had at first arranged to notice the designs.

The designs by Mr. M. D. Wyatt are two in number. A design marked "B" comprises additions and alterations to the existing building; and one marked "A" is for an entirely new National Gallery. Each design is very completely shown by drawings, including an unusual number of perspective views. They are accompanied by a brief report; in which however the author's conclusions from examination of the site, constituting the guiding principles for his design, are set forth in terms that should be duly considered: for, assented to or the reverse, they may conduce to a right decision. There can be no doubt that Mr. Wyatt has given great attention to the subject of picture-galleries. As to the present matter, he expresses an opinion that the general wish of the public is to have an entirely new Gallery, worthy of the country, and that to lose the opportunity would be disgraceful, and would prove the source of future regret. As regards the design "B," it has proved "an even more difficult task" for him than the other. In dealing with the present building, he would remove the dome, and the lanterns on the wings. He would also remove the side-porticoes; but he would attach others to the projections of the wings, (using doubtless the displaced columns,) and would crown each of these new porticoes with a pediment. The columns of the principal portico would be as now; but the pediment would be altered, at least so far as that it would be charged with sculpture in the tympanum, and upon the acroterium of the apex. Above the general cornice, an attic would be added to the building, composed of square antæ with Corinthianesque capitals, and a cornice and antefixæ, and of a filling-in of panelled masonry to the interantæ, for about three-fourths of their height, or leaving open space below the cornice, between the capitals. At each of the two projections, the drawing shows decorated masses carried up to a greater height than the general line of the attic-cornice. In the centre, beyond the portico, is a larger crowning mass; which takes the form of a structure having a portico of caryatides in the front, and a similar portico to the rear. This mass is the termination to the entrance-hall. The hall, internally, is flanked by columns; which separate it from two other halls, and new staircases, that are shown on the plan. Here in each of the flanking staircase-halls, a central flight, parallel with the transverse axis of the building, leads to a landing from which the upper flights branch right and left; whilst from the entrance-hall, steps in front of the entrance *descend* to the new galleries. The entire arrangement is capable of being made highly effective. On the further side of the ascending stairs of the eastern portion of the front building, is a second descending flight to a rotunda with columns. The rotunda forms part of the plan on the new ground, and is the vestibule to galleries in the middle of that ground, which are cruciform in plan. The stairs of descent first-mentioned, lead to a gallery of 28 ft. 6 in. in width; at the north end of which is a rotunda similar to the other, and placed like it at the end of an arm of the cross. At the eastern end, opposite, is a third rotunda, with an intervening compartment of plan wherein there are large semicircular recesses. Several such features are to be found in the plan; which generally is devised with great regard for the pictorial effect resulting from circular forms, and from the effective introduction of columns. The particular column used would be, in design, greatly varied from those of the classical orders. The base and lower part of the shaft would approximate to the Egyptian type, in outline, and in the decoration. All the galleries on the new ground, with the exception of those which are circular, and of the gallery reached directly from the entrance-hall of the main front, are placed parallel with, or at right angles to, the raking line of Hemming's-row. The principal gallery, on the north, would be 50 ft. in width; and those of the cruciform disposition would be 43 ft. 6 in. in width. Outside the latter, and between them and the present building southward, and the 50-ft. gallery northward, are four open courts, these being in addition to a court more to the east, as well as to different small courts. In the re-entering angle at the meeting of the line of St. Martin's-place with the end-line of the present building, a colonnade, or portico, quadrant-shaped and curving inwards on plan, would be placed; whilst attached to this would be an apsidal recess, with columns on the same radii as columns in front. The axes of the entrance, halls, and galleries are planned, to accord with one another, in a manner that deserves much commendation. In this design "B," the Square would remain as at present; though, in the other design, some alteration would seem to be contemplated. The ground-story would provide for the National Portrait Gallery and the Turner Gallery. It would be side-lighted in some parts; but generally Mr. Wyatt advocates top-lighting; and he proposes an arrangement, that is peculiar, for so lighting a story that has rooms over, which we must mention in speaking of his principal design, "A." An argument used by Mr. Wyatt in favour of an entirely new building, is that the present structure could not be made fireproof unless with almost entire reconstruction.

Mr. Wyatt's views with reference to an entirely new National Gallery, are so far important, that we feel called upon to give them at some length, prior to describing his "Design A;" though we should have preferred his starting with the consideration of the internal planning of the building, and with an inquiry into modes of lighting, instead of setting out with examination of the special conditions for external effect. Looking, however, at these conditions, which are of the site, he observes, first, that the most important view of the building would be from the south-east, and to persons going towards St. Martin's-lane, and that consequently, the angle next St. Martin's Church should be the central feature of the whole composition. Secondly, he observes, that the next most important view would be that from the southern side of Trafalgar-square, wherein the Gallery-façade would be cut in half by the Nelson Column, whilst the terrace-wall and steps would constitute the platform of the building. Wherefore he concludes that it would be "a grave error of judgment" to adopt any central feature of the façade, and that the existing symmetrical divisions of the terrace-wall should govern the disposition of the façade of the Gallery, so that the former might appear as the original podium to the latter. Mr. Wyatt, therefore, places a doorway of the main entrance to his building coincident with the axis of the principal flight of the steps at the north-eastern corner of the Square. The few returned steps are taken away, and others are

placed as top-steps to the present flight: the roadway is then widened; and the top of the flight is flanked by two pedestals and equestrian statues, instead of one pedestal and statue. He places a doorway opposite a correspondingly-altered arrangement of the steps westward. Thirdly, he finds that the next most important view must be from Pall-Mall East; and says that "that form of design which, dispensing with a central feature in the southern façade, provided leading eastern and western motives to close a long range of regular, large, and monumental features, say either colonnade or arcade," would, he "at once saw, compose most attractively when seen both from Pall-mall East and from Duncannon-street." He shows, in drawings, how his building would look from each of the points; and he considers that no building should be deemed satisfactory that would not look well from each. But we do not quite see that his design accords with his conditions. Having decided upon the south-eastern angle as his central feature; having placed there the doorway mentioned, which gives access to the grand-staircase to the galleries; and having also emphasized the angle by a circular feature, and by two domes,—whereof one is over the entrance in the front, and the other in the return-end, or side, of the building,—he establishes at the other end, features precisely similar, in everything, with the exception that westward there is but one dome. In short, the design is a compromise between the first-stated principle, and that of exact balance of two ends of a façade. Either there is a dome wanting; or there is one too many.

The western doorway of the façade gives access to the National Portrait Gallery; which, thus, rightly, would be as distinct as it well could be, if in the same building, from the National Gallery proper. Mr. Wyatt noted an authoritative statement in the House of Commons, that accommodation would be provided in the New National Gallery for the other collection, as well as that it might be desirable to provide in the Gallery for works of art other than pictures. General features of his design, besides what have been named, were established on conclusions, one of which was as follows: that "no building could appear monumental, and exhibit a becoming repose, which should have a ground-floor lighted by windows, and a first-floor, either without any openings, or, what would be worst of all, with sham windows." The curious reader will mark the divergence, on this occasion, of two practised enunciators of principles, Mr. Owen Jones, and Mr. Wyatt. We are scarcely overstating the facts in saying, that one allows his plan to be under subjection to a notion that a front should necessarily have windows for effect, whilst the other allows his to be subject to the idea that the front must either have windows in each of its stories, where there are more stories than one, or have no windows at all. However, Mr. Wyatt's conclusion led him to devising "means," as he says, "of lighting" his ground-floor by top-light entirely, or excepting the case of narrow galleries in internal court-yards. He considers that thus he has obtained three advantages: first, the giving the building "a fine solid plinth and dado, by way of base to rest upon"; second, the utilization of the recesses necessary for effect of light and shade; and, third, the doing away with "the distracting and dazzling effect produced by daylight, which, when seen in immediate contrast with any picture however brilliantly painted, invariably make it look dead and colourless." The main feature of his façade towards the Square, consists of seven arches on the level of the second story, and formed at the back as large niches. Immediately under each of these is an oblong panel for sculpture. This feature has a pediment that forms the front to a little glass-roof through which light is obtained to a recess belonging to the gallery of the ground-floor. Corresponding niches and pediments appear in a portion of the front towards St. Martin's-place, and have similar use. In the former case, each of the arches corresponds with one bay in the length of the principal gallery of the ground-floor, devoted to the National Portrait Collection; where the floor above is carried by columns similar in character to those described in speaking of "Design B." In the rear, each alternate recess corresponding to one of those of the front, is similarly top-lighted, but through a larger area of glass. There are similar lighting arrangements for the galleries on the new ground. In this part of the plan, the galleries, with the exception of one that is semicircular, next a court, and with the exception also of the gallery that is next St. Martin's-place, are at right angles to or parallel with the principal front. But there are other features of the plan besides those of the recesses, intended to be subservient to the top-light of the ground-floor. These consist of well-hole openings from the floor of the gallery above. Their purpose is of far more importance than that of the few openings mentioned as provided in Mr. E. M. Barry's design; where the rooms below are not meant for exhibition of pictures. Mr. Wyatt would seem to rely upon them for the bulk of the light that he would get to the middle of the area of his ground-floor galleries of the greater width; but, it seems to us that only the space immediately under the well-hole would be adequately lighted, or from the top-lights of the galleries of the principal floor, and that a large portion of the area in the ground-floor would be much worse lighted than it would have been had he substituted windows in the walls, combined with adequate height of the ground-floor story. Moreover, the same objection would apply to this arrangement as we have noted of Mr. Barry's, that it would negative the "fire-proof" construction that Mr. Wyatt recognizes the importance of. As regards the distribution generally, of the parts of the plan, the author of the design under notice has considered that looking to the great value of land in the situation, "and its limited extent when compared with that allotted to similar galleries in other great capitals of Europe," "as much of the land as should be consistent with ensuring due light and ventilation to every part" should be occupied with buildings; and he holds that his system of top-light for the ground-floor generally has enabled him to effect the object referred to, more completely than he could have done had he relied mainly on side-lighting; in which latter case, as he rightly says, his court-yards would have had to be larger, and his buildings fewer in number and lower, so as to admit uninterrupted rays through vertical windows. He adds that utilizing the present site to its full extent would probably render unnecessary future acquisition "of most costly land;" for it will have been understood, he has designed no extension over the site of the barracks and barrack-yard. As we have shown, however, we do not think he has quite succeeded in demonstrating the superiority of his system to that of comparatively large courts; which, indeed, are necessary for ventilation, air, and the prevention of continuance of dampness of soil and walls. The proper size for courts, with reference to light-admission to rooms, and height of buildings, should surely be better understood in the profession than it seems to be, judging from the different methods of treatment that we observe.

Mr. Wyatt appears to contemplate a considerable provision for sculpture; and there is this difference between him and Mr. Street, that, whilst the latter doubts whether sculpture and paintings should be in the same gallery, Mr. Wyatt considers that it would be best not to separate them: he would rather group the works of the two kinds "freely together, as in the Tribune and other galleries of the Uffizi at Florence." He adds,—"Such a mixture greatly relieves the strained attention of the visitor, while adding to the decorative effect of the whole structure. In fact, to take sculpture from a museum and place it where it enhances rather than detracts from architectural grandeur, is to redeem it from misapplication and to restore it to its legitimate function." We incline to this opinion, whilst recognizing that what is the best manner of lighting pictures is not necessarily best for sculpture, and that the convenience of a ground-floor cannot be overlooked where weight is in question. The principal galleries in Mr. Wyatt's plan are of course 50 ft. in width, as required by the "Instructions;" but he, differing from other competitors, considers this the proper width. In place of wall-surface above the height to which pictures would be hung, he would spring a decorative vaulted ceiling from the level, agreeing with the semicircular form which is that of the main ribs of his roof. Along the middle of this would be the opening for light. He says that, besides saving brick-work, his system "offers the great advantage (for a picture-gallery) of presenting surfaces receding from the light, and so falling into half-tints, thereby enhancing the luminous effect of the vertical surfaces" on which the pictures would be hung. Between the transverse ribs of the ceiling are lunettes. At the intersection of the galleries the space is domed over from pendentives, so as to produce a good feature of effect.

The entrance to the National Gallery proper, and that of the Portrait Gallery, are, as we have explained, in corresponding positions towards the ends of the front. Beyond each of them, there is a quadrant-corner of the building, with a columnar arrangement of the lower story, affording a needed place of shelter, as for persons waiting for carriages. The entablature of the order here carries arches which are over the intercolumns. Above these there are several decorative stages or stories: but the whole is a mere piling up of incongruous parts, or quite beneath the art of the rest of the design. It should be understood that the centre of the façade, containing the niches, has considerable elaboration of detail. Each recess would contain a statue of some celebrated painter; and the relief below would set forth some incident of his life. In the spandrels of the arches would be heads representing some of the artists' scholars. In the frieze there would be decorative panels of marble or granite; and red granite columns would be attached to the narrow spaces separating the niches. These last would be coffered in the vaulting, and enriched with vitrified materials; and generally, a rich polychromatic effect would be attempted with the aid of terra-cotta. A balustrade, and ten pedestals for statues of Apollo and the Muses would crown the whole. In each of the blocks where the entrances are, and which support two of the domes, there is some beautiful composition. To the doorway itself there is a species of balcony carried by cantilevers and Persians; and above the balcony is tracery, as though to the head of the door. Flanking the doorway are very large granite tablets, that some of the newspapers say are sepulchral, for names of great painters, with the dates of births and deaths. Above the doorway is a long panel, in a frame, like that of a picture, for sculpture. Above and below the panel, the mass is enriched with good mouldings. Each dome is combined with its supporting mass in a manner that is highly effective, and, we think, new. With the tambour are grouped four dormer-windows terminating the sides of the pavilion; attached to which are seated figures. We have stated that the south-eastern entrance leads to the grand-staircase. Next to this, and so that, between the stories, there is one landing, is a second staircase. Both staircases are shown, as they would appear, in one view. In the principal staircase a vaulted ceiling is carried in the centre, by a small arch from the entablature-blocks of two Corinthian columns which stand on pedestals that are joined together by a panelled piece of masonry. Some of the principal details of this staircase have a Renaissance character. The internal colouring, with the exception of that of the staircase, it is proposed should be quiet in tone, or as vellum-colour, gold, grisaille, and sparingly in low reds, greens, purples, &c., not overpowering any of the pictures.

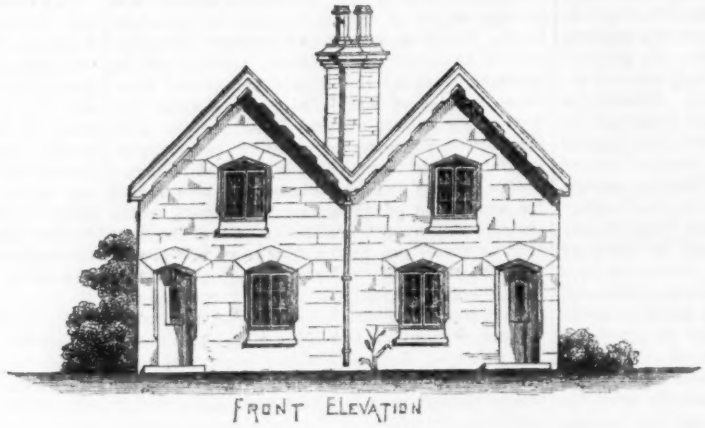
Mr. Wyatt has estimated the lineal feet of walls and screens for pictures, in each of his designs; and he makes the total quantity in "Design A" about 460 ft. more than in "Design B." The figures in "A" are thus stated:—

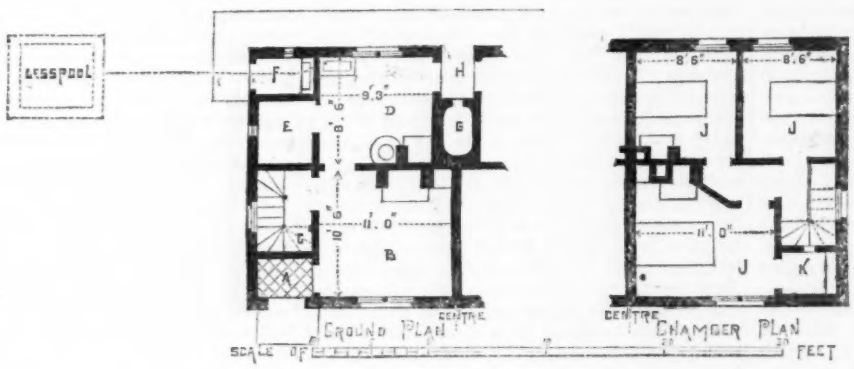
	Ft. lin.	Ft. lin.
National Gallery:—		
Ground-floor,—		
Wall space	1,063	
Screens	838	
		1,901
First-floor,—		
Wall space		2,944
Screens, *nil.*		
National Portrait Gallery:—		
Ground-floor only,—		
Wall space	700	
Screens	344	
		1,044
Feet lineal		5,889

According to an experienced surveyor, the design "B," retaining the present building and making the additions and alterations, would cost 275,000*l.*; whilst the design "A" for the entirely new building, would cost 420,000*l.*

We have not yet noticed designs by three of the competitors.

MACHINERY FOR MAKING BRICKS.—Mr. C. H. Murray, in a patent dated June 8, 1866, claims cutting the clay into the form of bricks by forcing the clay forward by means of a pushing board, or otherwise, against a series of fixed wires, so arranged that the clay is pushed on or forced past the wires on to a movable board provided with handles, so that twelve or any other convenient number of bricks may be removed at the same time, as described.





CONCRETE COTTAGES, SELLING, KENT.—Mr. B. Adkins, Architect.

CONCRETE COTTAGES.

Our engraving shows a pair of labourer's cottages just built at Selling, near Faversham, for Mr. E. Neame, under the directions of Mr. B. Adkins, architect, Faversham, and which from their economy of construction will, doubtless, interest those who are anxious to see the dwellings of the working classes improved.

These cottages are built of concrete, composed of gravel found near the site and Portland cement, and have been entirely completed ready for occupation at a cost of 100 guineas each. The same material was used for all paving, sinks, hearths, and other places where stone is generally used. The external walls are 9 in. thick, and the internal 6 in., and they are formed by laying concrete between sliding boards, the surfaces being floated over with a little fine cement and sand as the work is carried up. By these means a sufficiently smooth surface can be obtained to dispense with the usual inside wall plastering: the outside surface is afterwards jointed in the manner shown, and when dry enough coloured in the usual manner.

The use of concrete for these purposes enables the introduction of a common and inexpensive description of material generally found near the site, for if gravel is not handy, stones gathered off fields, or broken clinkers and burrs from the brickyard itself, mixed with a small proportion of sand, may be used, and with proper care stronger and dryer walls can be built with these than of ordinary 9-in. brickwork. Mr. W. Goodman, of Whitstable, is the builder.

In proof of the economy of this description of construction, these cottages when compared with a block of three similar brick cottages recently built in the same neighbourhood under a close competition, show a saving of about 50*l.* per cottage. A greater question, however, even than cheapness arises, and that is the absorbent or non-absorbent qualities of materials. Bricks such as are too often used in such constructions absorb a large quantity of water, during rain for example, and retain it a long time. Experiments upon well-made stone concrete seem to show that its power of absorption as compared with that of brickwork, is very small indeed, especially if the concrete be made with cement.

REFERENCES.

A. Porch.	F. W.C.
B. Living-room.	G. Oven.
C. Pantry.	H. Lobby.
D. Washhouse.	J. Chamber.
E. Wood and Coals.	K. Store-closet.

THE DEATH OF ALEXANDER SMITH, THE POET.

With regard to the sanitary circumstances we have referred to as connected with Alexander Smith's death, we must always remember that an individual member of a community or a country is of necessity as subject to its malpractices in government—sanitary or otherwise—as he is to any other part of its constitution. A man who chooses to reside in Scotland must make up his mind to certain risks. Just as Count Cavour was bled to death by ignorant physicians, so may the poor poet be said, on similar principles, to have fallen a victim to the sanitary police of his country. Those who choose to read what we printed in a recent impression (Jan. 19th) with regard to the sanitary condition of the new town of Edinburgh, will see that even the modern Athens is anything but a bed of roses. But the new town is a paradise compared to the old town; and the Edinburgh University, where Smith had his office, is situated in the very centre of the old town, which has been for centuries one of the filthiest of modern cities.

The secretary's office itself has been described to us as a sort of mural cell—excavated rather than built—in one of the piers of the stupendous arches which cover the roadway into the very handsome and stately quadrangle of the Edinburgh College. At best it is only fit for a porter's lodge. How it is heated we cannot say; but it is lighted and probably ventilated by entresol windows only, of fanlight pattern, one of which, the south window, opens upon the well-known College-street cab-stand. The opposite pier of the central archway—6 yards or so from the secretary's door—is converted into the public urinal of the college; and our readers may judge how much the atmosphere of these conveniences would conduce to the salubrity of the secretary's office. We will say nothing about the dissecting-room on the one hand, or the hospital on the other. But round the north corner, right under the "principal class-room" windows, is one of those horrible public privies for which Edinburgh has become infamous, and which of itself is enough to pollute the atmosphere within the radius of half a mile! Was ever a poor poet so environed? Yet here he sat from ten till four every day for nine months in the year.

It was in all probability in order to escape from these compound nuisances that he fixed his residence close to the sea. But here he was perhaps as badly circumstanced. The village of Wardie lies half-way between Newhaven (one of the most uncleanly fishing villages in the British islands) and Granton, near which there has recently been erected an extensive manufactory of artificial manures, the smells proceeding from which were sufficient last year to drive Sir John Macneill and his family from Granton House just as if it had been invaded with pestilence. This was bad enough, but this was not all. The beautiful slopes which spread from Edinburgh to the sea are irrigated more or less with the Edinburgh sewage, and the natural surface-drains or water-courses are thus filled with sewage. Sometimes in hot weather the flow is abated and the contents become stagnant. But we need not dwell on details which we have often given. In the midst of these "Elysian fields" the poet had his little villa, and here he cultured, we shall suppose, moss-roses and anemones, or grew some wild thyme and lobelia upon the arid banks.

He might try, perhaps, to console his nature during his sufferings by "gazing out into the ever-surging waves." But here, alas! was perhaps his most fatal enemy,—a bitter, cold, biting, acrid, and unextinguishable draft of north-east wind. If such a neighbourhood caused the death of the powerful and robust Edward Forbes, it is no wonder it proved fatal to Alexander Smith.

The immediate cause of his death was diphtheria—a name given by M. Bretonneau to a class of diseases which are characterised by a tendency to the formation of false membranes, and which affects all the dermoid tissues, but chiefly the mucous membranes of the throat and air passages. Such diseases have invariably their origin, it is thought, in some form or other of blood-poisoning, and the present case will add additional strength to the belief. Those profound physiologists who roundly assert that there is no danger in bad smells will take warning from this case, perhaps, and amend their philosophy. But we will not dispute with them on their nice speculations. It is enough for us that Alexander Smith is dead; and a valuable life has been prematurely extinguished,—more than possibly by sanitary neglect and misgovernment. Who is responsible for this it would be tedious to inquire. In Scotland they manage those matters so as to divide and evade, often to destroy, responsibility. In Edinburgh, at this moment, there is a medical officer of health, a superintendent of streets and buildings, two or three sanitary inspectors, besides the ordinary staff of

scavengers and their officials. But all these are subordinate to a committee of the town council, which consists chiefly of respectable tradesmen. There is a similar junto in the burgh of Leith. To discover the responsible party in this series of local authorities would puzzle a better investigator than we profess to be. We therefore rest the onus upon the whole of them.

We have little else to say. If we speak strongly on such a subject, it is because we feel strongly. Without going the length of the Pantheistic doctrine so finely illustrated by Sir Walter Scott:—

> "Call it not vain! they do not err
> Who say that, when the Poet dies,
> Mute Nature mourns her worshipper,
> And celebrates his obsequies!"

Without going this length, we may say that we hold the opinion very strongly that the death of a poet or man of letters like Smith is a loss to the country. But how much are our feelings of regret intensified when we find this death due to circumstances which we may not only control, but, with some carefulness, prevent! Indeed, we confess that indignation in such cases often gets the upper hand of our softer sentiments. But we have said enough. It only remains to add a single word concerning the poet's burial-place. Alexander Smith lies buried in Warriston cemetery, within a pistol-shot of his residence at Wardie. He lies, says a spectator of the funeral, in a sunny spot, commanding one of the finest views of the city whose beauties he had so eloquently described; and the cold but rich light of the early sunset seemed yesterday in melancholy harmony with the last scene of his bright but brief career!

ANCIENT SYNAGOGUES IN CENTRAL EUROPE.

QUOTING and commenting on our recent article on this subject, and the View of the ancient Synagogue in Worms, the *Jewish Chronicle* says,—

"It is true that no very ancient monuments are found in the cemetery adjoining the synagogue referred to at Prague, as the populace, at the repeated risings against the Jews, during the Middle Ages, was wont to vent its rage as much upon the dead as upon the living, and to destroy the tombstones. There are, nevertheless, a few monuments in it dating, we believe, from the fourteenth century. Some years ago there appeared a very interesting publication, containing copies of all inscriptions on the sepulchral stones in this cemetery, as far as they could be made out."

If it is really true, as the writer asserts, that there still exist in the cemetery at Prague monuments of a date as early as the fourteenth century, they can only be plain inscribed stone, and as such are of no value architecturally. Many of the tombstones in this cemetery commemorate persons who lived as early as the tenth and twelfth centuries; but the original monuments have been destroyed, and those which replace them are sixteenth and seventeenth century works.

"A splendid synagogue, almost entire, still exists in Spain. It is situated at Toledo, and was built by Rabbi Samuel Hannaghid, the finance minister of Don Pedro the Cruel. The synagogue, we believe, was built in the fourteenth century. A description of this ancient place of worship was given, among others, by the late E. H. Lindo, in his 'History of the Spanish Jews,' and who had paid it a visit in person."

It has been supposed by many people that the building called the "Jews' House," at Lincoln, was originally a synagogue; but the fact of its being on two floors, and the remains of ancient chimneys, are sufficient proofs that it can never have been anything else than a dwelling-house, though one of no ordinary class. This building is late Norman, and has a very pretty little doorway. With reference to our observation as to the isolation of the Jews, the writer in the *Jewish Chronicle* remarks,—

"There is abundant evidence to show that this isolation did not exist then, but that the intercourse between the Jews and Christians was habitual and most cordial; that there existed no ghettos and scarcely any of those exceptional laws which in subsequent ages brought about that lamentable isolation which in process of time led to a great estrangement between the followers of Moses and Jesus. It is principally two agents which brought about this isolation. The first was the fanaticism gradually roused in the general population by bigoted monks, priests, and the decrees of the councils; secondly, the rivalry of the guilds and the trading classes. Wishing to rid themselves of the competition of the Jews, they were at all times ready to join in the outcry against the Jews by bigoted priests; to propagate all kinds of false reports against them; and had influence enough with the authorities to obtain decrees which either kept their rivals altogether from the field of competition, by banishing them from the cities, or deprived them of all means to interfere with trade, by confining them to special quarters, and keeping them, as it were, in prison under lock and key. Most of the expulsions of the Jews, confiscations of their property, and even massacres, can be traced to one of these causes, or to a combination of both. The isolation of the Jews was only gradual, and the work of centuries. We need not, therefore, be surprised to find that the Mediæval synagogues have so much in common with Mediæval churches."

Now, although it is perfectly true as stated here, that there were no penal laws against the Jews in the earlier centuries of the Middle Ages, yet it is quite clear, from historical evidence, that the Jews kept themselves aloof from their Christian brethren, retaining their own peculiar manners, customs, and dress; and this being the case, it is difficult to imagine that they should have copied Christian churches in the erection of their synagogues.

There can be no doubt that the ill-feeling which existed against the Jews, during the Middle Ages, was not only a religious prejudice or commercial jealousy, but even a far deeper feeling than either: it was the antagonism of race. The feeling against the Jews in the Middle Ages was what we now see exemplified in the bitter hatred of the white man to the black in America; and even at the present time there are many persons who are utterly indifferent to all kinds of religion, and care little for commercial interests, who retain the most cordial dislike to the Hebrew people; and it is a singular fact, that until the year 1848, no Jews were allowed to live in Nuremberg, and no one would accuse the Nurembergers—the *most* Protestant people in Germany—of being led on by monks and priests.

M. Viollet-le-Duc, in speaking of the synagogue at Worms, seems to doubt the fact of its having been originally built as such. He is most certainly in error; for not only is there the strongest historical evidence, but the fact of the plan being nearly identical with the synagogues at Prague and Frankfort, forbids belief that this building could have been erected for any other purpose.

GLASS PAINTING; ANCIENT AND MODERN.

ON this subject Mr. T. Gambier Parry has been lecturing in Gloucester, and here is part of what he said:—

With peace restored at home, and leisure to return to the arts of peace, the relics of old days and old things at home, of home history, home romance, home devotion, soon begin to touch people to the quick, and to engage a warmth of cordial affection which all the copies from Athens, Rome, Spalato, or Corinth could never command. Among the relics of our national arts none engaged a more general attention than those associated with our national architecture, and pre-eminently that of painted glass. It was valuable for its heraldry, its costume, its legends; but some loved it for its beauty, and caught the first glimpse of the refinement of its art, which for centuries had shared in the contempt of all things Gothic. People had been taught to look at everything through Palladian spectacles. All avenues to really national taste had long been closed. This country had been overwhelmed by three centuries of invasions—religious invasion of the old form of faith, democratic invasion of the old forms of government, invasions of Dutch arts and notions with a Dutch king and Dutch nobility. But things began to settle down. People began to yearn for something of their own. The old national arts were revived with all the interest of novelty. Their very principles had been forgotten. Italian fiddlers, French cooks, Flemish painters, and Dutch architects had put out all memory of them. But the national arts, once dear to all our people, were soon to live and flourish again.

The first glass-painters of this modern Renaissance in England were unhappily no artists. They floundered about in a perfect mosaic of difficulties. They were staggered by multiplicity of styles; they had no good art in themselves, no good materials in their workshops. There seemed to be no standard of excellence; there was no standard of public taste. The contrast between the vigour of the old work and the poverty of the new grew more and more painful; the old savoured of art, the new savoured of the shop. What was to be done? To imitate? Yes, to imitate; and to the necessity which drove them to it will be hereafter traced the cause of the pre-eminence which I firmly believe our artists will attain. Imitation the most laborious is the very foundation for all hope of ultimate success in the education of artists. The processes, the theory, the rationale of art, need to be analysed before the mind can digest them. Imitation is not base, except in this—that it is the very base of all success. The most heaven-born genius must first have learnt to spell. England did not stand alone in difficulty. In Germany the art was taken up with spirit, but the old examples were too soon cast aside. The reasons of their beauty, the nature of their materials, the very alphabet of the future language of the art, were neglected. In Germany the only real success has been in an art unsuited to the large scale of windows, in the beautiful cabinet examples of enamel-painted glass, principally of copies on a small scale of old pictures of their own school. Their merit is in technical dexterity—no more. For the high purposes of an independent art such works are but hinderances, influential only for bad. I know nothing more futile, more unhappy, in matters of taste, than the attempts to mimic the productions of one art by the processes of another. The attempt to reproduce in glass the works of the oil or fresco painter might be made in a modest admiration of the great works of other men; and so far the motive could be respected, but no further. Glass-painting is no mere supplement to any other art. It has an individuality all its own: it will stand or fall on its own merits, and for them it need not fear. The Germans have been among its most unfaithful followers. In other styles of art their painters are not strong colourists. It is strange that this should be so; for as a nation Germans are the greatest of musicians, and music is essentially the art of colour; but their painters, with rare exception, do not share in this great gift. It was therefore not unnatural that in an art of which colour is the great characteristic they should fail to seize the true ideal: they failed even to perceive the true properties of their material. Regardless of the principles of old art, they formed a dull ideal of their own; they went to work on glass as if it were canvas or paper. They worked as if they were afraid of it; they coated their glass with enamel; they did all that was possible to get rid of it; they reduced it to the condition of transparent calico, and then painted upon it, but with the veriest abuse of glass,—brilliant, glancing, jewelry of glass! such as in the days of Gothic art filled their cathedral windows with a glory as yet unrivalled, and blazed and sparkled with a reckless brilliancy. With such as this, the genuine use of glass, our modern Germans have but little sympathy, at least if we are to judge them by their works. I must be understood to be speaking thus in general terms. There are honourable exceptions among German artists of glass-painting, pre-eminently in their cabinet copies of old pictures. It is hard and thankless work to try to make people see what they cannot see. In matters of this kind they are in general satisfied if only they find things, as Irish people call them, "pretty." There is little or no perception of aptitude and inaptitude in works of art. If glass is made to look like calico, or calico made to look like glass, so long as it is "pretty" indifferent people say, "Who cares?" In modern Italian glass there is very much the same radical error. But then the Italian is essentially a colourist. In glass, however, he, like the German, has begun at the wrong end. The Italians never had much sympathy with Northern art. They rather affected to despise their Gothic neighbours,—they ignored those Northern Teutonic schools of art, which nevertheless had covered church walls with paintings, and windows with storied glass, and had matured an art, marked with all the individuality of national character, well nigh 100 years before Giotto dipped his first brush in colour. And now, too, in their modern (Italian) revival of glass painting they ignore those schools again, from which the first lessons of the true art in glass can best be learnt. They have missed, too, those identical principles, even when displayed in their own glorious cinquecento windows, the principles of translucent colour. They have rather gone in for a style of art more suited to paper than to glass. They have produced some designs, tempered certainly with great beauty and refinement, and they have transferred these designs to glass. But why to glass? Why to great sheets of fragile glass, toned down with dense enamel, worked and laboured at till all the glass was lost sight of, changed, got rid of, treated just as oiled cardboard might have been treated, and with precisely the same result? Again, we look in vain for the glancing jewelry of glass: instead

of it we find pictures, which in treatment, texture, and effect resemble precisely large coloured lithographs varnished into transparency—labour misapplied, art misplaced—one indeed in which we admire the frequent beauty and merit of design, and delicate execution; but it is not the Art of Glass. Refinement and tenderness are merits indeed, but they become morbid and vicious when they occupy exclusively the heart and hand of an artist, leaving no room for other qualities such as vigour and decision. Why are the glories of old glass at Florence and Venice, at Chartres and Bourges, passed by, rich as they are with many a lesson which a glass-painter need learn, examples which illustrate the entire powers of the art, and its scale complete, from gorgeousness to solemnity? Let those old works be equalled first, before there be any pretence to improve upon them.

In France and in Belgium the revival of this art has been carried on with much the same feeling as in England. The principle that has appeared to guide the best men in these countries has been to keep one hand stretched out behind with firm grasp upon the past, while the other was stretched out toward the future. They took no heed of the taunts about copying. They knew that they were but working out great secrets of past excellence to be the groundwork of their own. There has been, indeed, a most mean and miserable copyism, carried on by men who could do no better; and through their ill-doing the reproach has been misapplied to all. They knew all the while what they were about. They knew well what was good, what bad in the works they studied. If in the Gothic Mediæval art of France and England figures were painted in ignorance of anatomy, and architecture in ignorance of perspective, what matter! You might as well look for the word "photography" in Johnson's Dictionary as for the rules of the Academy in a Gothic window. No; the grand old fellows of those Middle Ages did their best. They felt with poetry, and they worked with earnestness; but, what is more to our purpose now, and for our study, they had a most thorough knowledge of the use of glass. That is the lesson we have to learn from them. We may draw better, our technicality and science may be greater. How could it be otherwise when each generation does but light its lamp from the one that has gone before? But those dull generations between them and us unluckily let the lamp of glass go out. So we, to light our own, must reach still farther back to the old lamp of our forefathers, which is bright and glowing still. The revival of this art on such right principles as this gives, not only hope, but confidence in ultimate success. One may grieve at the atrocities which have filled cathedral and other windows with disgrace in modern days; but there have been some grand things done. If there has been one fault more prominent than another, it has been that both the artists and the public have thought too much about the subjects painted, and too little about the glass itself. The result has been in too many cases that glass-painters have consecrated works to the genius of the arts which ought rather to have been consigned to the simpler genius of the pestle and mortar.

Of the early history of the art very little is known. There appears no reason for supposing that coloured glass was used in windows before the Christian era. The early Egyptian and Greek coloured glass, so far as we can acquaint ourselves, was but semi-transparent; commonly used for coating earthenware and in making small ornamental vessels. Somebody has lately taken out in England a patent for glass coffins. He must have a very high opinion of his friends. The Egyptians and Parthians made glass coffins between 200 and 300 B.C. There are some in the British Museum. There were few colours made in glass in those times, but a good many varieties of tints. A good red is not to be found. There are tints of deep and pale blue, ochre and straw colour, browns and greens. About the use of glass in windows before our era little or nothing is known; what is described bears no analogy to our system of flat sheets set in frames. That glass was used in windows at about the beginning of our era we know from the remains at Pompeii, and Wroxeter in England. But we have no trace of coloured glass used for the purpose. Pliny's expression about glass is that "*Nulla est materia sequacior aut pictura accommodatior*," which at once suggests the idea of a pictured window. I conceive that in reality it refers to opaque enamels and to the ornaments in the glass bottles and vases of his time, which were made with many-coloured pieces, twisted or drawn out when hot, and worked into all kinds of forms by means of their extreme ductility. Many materials besides glass are described as used in Roman windows, such as talc and alabaster. The Japanese used the same expedients, and in addition to them large transparent shells. St. Wilfrid, of York, describes church windows in his time (he died A.D. 702) as filled with transparent stones. The rareness of glass in windows would be inferred from the very few notices of it to be found in two such writers as Philo and Lactantius, who refer so intimately to the habits and usages of domestic life in their times.

The earliest pictorial use of coloured glass was in the tesseræ of the mosaics; and it is by no means improbable that glass-coated materials and glass itself in flat sheets were used in the polychrome decoration of walls. Some of the most beautiful early examples of designs on glass are those of figures of the early Byzantine school, engraved in gold leaf inlaid between two layers of transparent glass. But the way was being fast prepared for coloured glass in windows. The use of tesseræ in mosaics on walls and floors was the natural suggestion for a similar use of coloured glass in windows from the first moment that a perfectly translucent quality of it was made. Figure subjects had been common in mosaics—why, then, should they not be introduced in coloured glass? Thus the art of painted glass must naturally have begun; but the earliest positive information I can find of coloured glass being used in windows is in Prudentius's notice of it in the Basilica of St. Paul, at Rome, in the fourth century. We next hear of it at a church at Lyons in the fifth century; and the coloured glass there was arranged in patterns. The next in point of time distinctly spoken of are the windows of St. Fortunat, Bishop of Poictiers, in the sixth century; and in the same century we hear of the introduction of it in a church at Tours by St. Gregory. So that by that time the use of painted glass in windows had spread commonly and to a great distance. But in England we had not been so fortunate. St. Wilfrid, in the seventh century, laments that makers of coloured glass were not then found in England—so he went to France in search of them. In the next century, the eighth, we find Pope Leo the Third filling the apse window of the Lateran church with coloured glass in the year 795. But up to this time we hear nothing definitely of painting upon glass.

After all the pains which antiquarians have bestowed in the research, it does not appear that any account of figure subjects can be traced with any reliable authority earlier than the middle of the eleventh century; and the example cited is the subject of the mystery of St. Paschasius in a window of a church at Dijon, mentioned by the historian of the monastery of St. Benigne, A.D. 1052. The French King Charles le Chauve was the first great patron of glass-painters. Soon after his time the art became universal. The treatise of Theophilus, of about that period, describes almost every process necessary for a complete window, with the whole detail of its design and colouring of patterns, figures, and draperies. So that it is impossible not to infer that an art so complete as he describes it, must, to have attained such completeness, have been practised long before, although we can find no written account of it. All that actually remains to us is in small pieces coloured separately and inlaid, as in vitreous enamels, mosaics, and encrusted ornaments, or bits of glass in imitation of gems, on book-bindings, church vessels, rings, and so forth. At about this time (the twelfth and thirteenth centuries), glass painting became a very distinguished profession. Its professors were honoured by privileges and dignities at Venice, and in Normandy by the semi-noble distinction of a title, that of "gentlemen glaziers." In those miscalled "dark ages," those "benighted" Gothic times, when Christian art first sprang forth in all its freshness and beauty, schools of art were established in religious communities, and the artists of those times, trained in the whole range of education then open to them, appear to have practised all the arts of design connected with architecture, so that wall painting, designs for sculpture, illumination, and glass were followed equally by the same persons. In the earlier styles, the artistic composition of picture subjects was made effective, and the groups of figures relieved from each other by contrast of colour, rather than (as in more recent work) by opposing and contrasted forms. Their shadows consisted of little else than lines, so that the glass was honoured throughout, and the right principle of a window was maintained as a thing of light. But as time progressed, and the arts of mural painting and illumination became more realistic, glass-painting followed in the same strain.

Translucent glass-painting for the purpose of windows has been entirely confined to Christian use. I instance Pompeii and Wroxeter for their evidence of the use of glass used in windows of Pagan times; but they were not coloured. Coloured glass has from early times been used by Mahomedans, but it was not painted. Painted coloured glass is therefore solely Christian. In Mahomedan mosques the ornamental glass was used on the principle of transparent mosaic. The design was cut out of their plates of alabaster or stone, or moulded in plaster, and the glass, most beautiful in colours, was let into them, as gems would be set in jewelry, in patterns of flowers, foliage, or any other conventional design of geometrical ornament. The effect was exceedingly rich. Specimens of these works are still to be found in Constantinople, in the mosque of Hebron, and in other Oriental buildings. That is glass mosaic, not glass painting.

The improvements in the Christian arts of painting during the fifteenth century were very rapid. Those improvements of the oil painter and the fresco painter were, however, the first poison drops which ultimately ruined the art applied to glass.

About the middle of the fifteenth century the treatment of pictures in glass became more and more relaxed. The artists had hitherto been guided by the safe principle of deference to the architecture of which their work formed a part. After that time the architect's design seemed to be beneath the notice of the glass-painter, who spread his picture over the whole window-space regardless of all obstacles. A little later in date than this a magnificent style of glass-painting was developed in Italy. Glass was treated pictorially indeed; but, like most genuine artists, as they were, the Italian designers of those pictures felt intuitively that the compositions and resources of other styles of painting were unsuitable for glass. So they went in for light and colour like men, and designed for breadth of contrast and vigour of effect, figures, architecture, fruit, flowers, animals, and then leaded them all together, regardless of atmospheric effects, without much care for perspective, and with an equality of colour throughout and relief in the detail just enough to save all the objects from confusion. The effect was the most powerful that glass could produce: it was flat, architectural, and grand in the extreme. The success of those windows consisted in this, that their designers were first of all consummate artists themselves, and then that they had the genius and wit to seize the true and complete idea of the materials they had to work with. Theirs was the last blaze of that fine art for many a long year. Their ancestors adopted a new system by painting upon glass with enamel colours. The result was the rapid decline of the art. They would paint. The art of glass, therefore, was no more. It had throughout borne witness to the fact that architecture was the master art. The harmony which had ever existed between the various styles of glass-painting and architecture arose, not only from the painters employing the same general character of ornamentation, but far more from the deep current of a mutual sentiment which pervaded all the contemporaneous arts of the Middle Ages. When the purity of feeling declined in one, it declined *pari passu* in the other; and it was but natural that it should do so, because art is only the reflection of the hearts and minds of men, and it rises and falls with them. Such was the fate of glass-painting south of the Alps. In the north much the same result occurred. Religious and political troubles far and wide completed its ruin. But here and there, and more particularly in Holland and Flanders, the old vigour of the art was revived. But the taste of the times was coarse, and the idea of art was too realistic to be attained in glass, without straining it beyond its proper functions. Some grand effects were, however, produced by combining the inlaid system of the best times with the enamel painting of the worst. The inferior artists revelled, as usual, in the vulgarity of violent effects. The public taste of their day was low, and was growing lower. There was no demand for good art; so there was no supply. And thus the art dwindled away, till it fell, as I described at the

beginning of this address, into the hands of the plumbers!

After this sketchy review of the progress and decline of the art, the subject which remains to us seems to divide itself into two parts, relating to its practice, viz.,—1st, the treatment of ornamentation; and 2ndly, the treatment of figure compositions. Of the first of these a great deal is to be said; but as the second would be more interesting to you and more profitable for our present purpose and limited time, I will not delay on the subject of ornament, but pass on to that of figure subjects, or what might be called "pictures in glass." It might, however, make what I have hereafter to say more clear, and be of use to those whom I address who are not well acquainted with the processes of this art, if I make a short digression to say a few words on the nature and use of the materials. This art is very little practised by amateurs. It is, perhaps, more admired than understood. When glass-painting is spoken of you should know that it does not imply the use of colours in any way similar to that of other arts. The artist makes no colours, but purchases them in the coloured glass supplied by the manufacturing glass-stainer. The process by which he produces a painted window is this. The subjects are first designed on paper (called from its size "a cartoon") in black and white. The colours for the various parts of it are determined, and glass of the colours required is chosen for them. The design is then laid out on a table, and upon each part of it, as for flesh, draperies, background, ornaments, &c., the pieces of glass, already chosen for them, are cut out and laid. The glass being transparent allows the drawing and shading of the design beneath to be seen, and these are traced and drawn upon it with a brush, as any one would trace upon tracing paper. The material used in the brush is a powdered oxide of iron and copper of a uniform colour, much like sepia, which is mixed with gum and water, and this is eventually fused into the surface of the glass by the heat of a furnace. Golden tints and ornaments are usually produced in a different manner; they are commonly added subsequently by the transparent yellow stain of oxide of silver fused upon the opposite side of the glass. And thus the work is done, so far as the artist is concerned. Each piece is then leaded together into its place, and the window is completed. All this sounds a very simple process, and, indeed, it is so; but the same might be said of the mere processes of any other art. The really great difficulty is proved by the rarity of success.

THE LATE SIR WILLIAM SNOW HARRIS.

IT is with deep regret that we have to announce the death, on the 22nd ult., of Sir William Snow Harris, one of our most distinguished scientific experimentalists. He was born at Plymouth, in the county of Devon, in the year 1792, and was consequently in the 76th year of his age. He was educated in the Grammar School of his native town, and thence he proceeded to the University of Edinburgh to study for the medical profession, which he practised for several years with great success; but his whole heart and soul being in the physical sciences, he soon abandoned his practice in order to devote his attention to the study of the elementary laws of electricity and magnetism. In 1820, he made a valuable invention for the protection of ships from lightning, which he submitted, together with an interesting account of his invention, to the consideration of the council of the Royal Society, of which Sir Humphrey Davy was the then president. After much investigation on the subject, the Council of the Society warmly approved of his invention, and communicated with the Admiralty urging its immediate adoption in the Royal Navy. In 1831, he was admitted a Fellow of the Royal Society; and in 1835 the Society awarded him the Copley medal, one of the highest honours in its gift.

The value of the invention will be readily appreciated when we state that loss or damage in the Royal Navy from lightning has ever since that time been absolutely unknown, while previously the material damage alone had been estimated at 10,000*l.* per annum. In 1847, her Majesty, in recognition of his valuable services, had conferred on him the honour of knighthood, and he had on several occasions been honourably mentioned in both Houses of Parliament. In 1860, he was appointed scientific referee to the Government in all matters connected with electricity; and in this capacity he had to superintend the fitting of the conductors of the Houses of Parliament, the powder magazines, Buckingham Palace, Windsor Castle, and the Royal Mausoleum at Frogmore, in which are deposited the remains of the late Prince Albert. He was also the inventor of an improved mariner's compass, and the unit jar for measuring out definite quantities of electricity.

Sir William was one of the original members of the Philosophical Club of the Royal Society, and had been a valuable contributor to the "Transactions of the Society," and to the *Edinburgh Philosophical Journal*.

THE ART-UNION OF LONDON.

"PITY" is the title of the plate provided by the council of this association for every subscriber of the current year. The original picture, by Mr. Le Jeune, A.R.A., represents, with much feeling, three young girls, who have found a wounded robin in the snow, and are endeavouring to coax it to them. The subject is not of the high and grand character possessed by some of the other works now in progress for the Art-Union, such as Armitage's "Parents of Christ seeking Him," or Maclise's noble wall-paintings in Westminster Palace; but there is pathos about it, and the touching expression in the girls' faces will find many admirers. An institution whose aims should be catholic in matters of art, must vary the character of its productions. Mr. Lemon has engraved the plate with great delicacy in the pure line manner; and in these days when publishers demand the rapidity and cheapness of production afforded by the chalk or mixed or mezzotinto process, it is to be observed that the Art-Union of London almost alone gives encouragement to the higher class of pure line work; just as in the production of high-class bronze works and medal-die engraving, it represents almost exclusively the amount of aid extended in England to these branches of art.

Apropos of these matters, we may remark that the English commissioners have gladly accepted an offer of the council to lend some of the society's bronzes for the Paris Exhibition. Some of their later engravings, also, will be found on the walls of the English Court.

A model, reduced by Mr. Birch from his statue of the "Wood-Nymph," for which he received the society's premium of 600*l.*, has been placed in the hands of Messrs. Brown, Westhead, & Co., for production in parian.

THE NEW MARKET HALL, SHREWSBURY.

THE chief stone of this new hall has been laid. The edifice will be in the Italian style of architecture, and will be built of black, blue, red, and white brick, with Grinshill stone dressings. Its total length will be 322 ft., and its greatest breadth 148 ft. On the basement will be twenty-eight vaults for the storing of goods, with two inclined roads leading thereto. One of these approaches will be 10 ft. wide at the entrance, and in the centre about 24 ft., so as to allow a cart to turn. Both lead into Claremont-street. On this floor there will also be seven shops, and a large fish-market, with ice-house, and heating apparatus. The whole building is to be warmed by hot air. The ground-floor will consist chiefly of the general market. There will be six entrances to this portion of the building. The principal entrance will be at the Mardol end of the building, and will consist of an arcade, 17 ft. wide, with rows of shops on either side. On this floor there will also be a butcher's market, fruit market, the hall-keeper's office, water-closets, and other conveniences. On the first-floor, over the fruit-market, will be the corn-exchange, a room 89 ft. long by 45 ft. wide. Over the shops will be a gallery, suitable for the sale of light market goods. In Claremont-street a covered cartway will be erected for the landing and unloading of goods in wet weather, and the roof of the building will be covered with Bangor slate. The windows and doorways are all circular-headed, and the doors will be made to slide in a groove in preference to hinges. The front on the Shoplatch side will be 88 ft. in height, and that of the tower which rises near it, 151 ft. The latter will be surrounded with an ornamental iron vane. This front will stand some feet further back than the line of the old buildings. The other side of the building in Claremont-street will resemble the one in Shoplatch.

The plans were prepared by Mr. R. Griffiths, of Stafford; and the contract is being carried out by Mr. Barlow, Stoke-upon-Trent.

SANITARY CONDITION OF MERCHANT VESSELS.

IT is satisfactory to find sanitary reforms to the necessity for which we have long been calling attention now urged on all sides. The *Lancet* has brought its reports on the Present Sanitary Condition of the Mercantile Marine to a conclusion. The third and fourth reports deal with the accommodation provided for the men on board, their clothing and personal hygiene, and the further improvements necessary to ameliorate the condition of the men. The old forecastles and top-gallant forecastles, which in a large proportion of ships are still maintained, are rightly condemned. "Imagine a small triangular space in the bows of a ship, the maximum dimensions of which required by law are 74 cubic feet for each individual, flooded by the waves, and practically uninhabitable if above deck; filthy, dark, damp, and unventilated if below: no pains being taken to provide such simple contrivances as mangers, hawse-pipes, ventilating funnels, rain-awnings, and furniture, which might exclude water, admit fresh air and light, and somewhat mitigate their comfortless condition. Compared with such abodes the worst workhouse ward or Irish cabin is almost palatial." True, in fine weather, the crew may sleep and eat in the open air; but, in bad weather or in harbour, the forecastle is the home of all: at no time is there any other refuge for the sick, whose condition is, therefore, most deplorable. Years ago we pointed out this, and the evils of the sleeping-places generally. See, too, our sketch, "A Berth that brings Death," reproduced in "Another Blow for Life," p. 104.

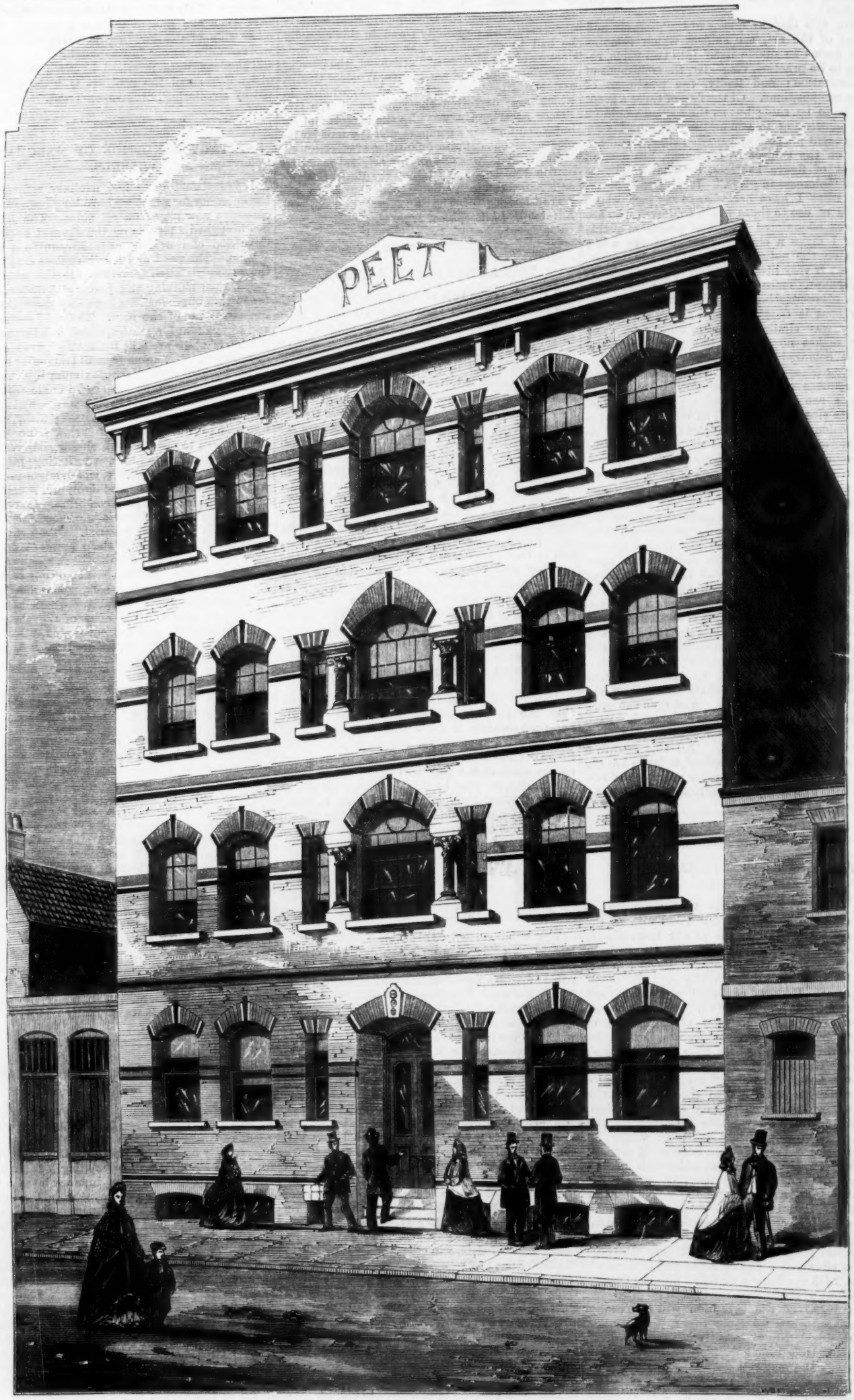
THE MONT CENIS TUNNEL.

THE Turin *Opinione Nationale* gives the following return of the state of this work on the 31st December, 1866:—On the Bardonnèche side 3,940 mètres had been completed, and on the Modena side the work had advanced to a distance of 2,434 mètres, making a total of 6,371 mètres, of which 1,025 mètres were excavated during the year 1866. The entire length of the tunnel is 12,220 mètres, so that it is now more than half completed. Supposing the present rate of progress to be maintained, nearly six years will be required before the line is finished. It is expected, however, that this year's returns will show an increase, inasmuch as the boring on one side during the past year was rendered more difficult by a bed of quartzose rock, the position of which was predicted by the geologists, from a careful survey of the dip of the surrounding strata, within a hundred feet or so of the place where it was actually met with.

CORK WAREHOUSE, LANT STREET, SOUTHWARK.

UNDER the direction of Mr. Joseph S. Moye, architect, Hertford-street, May Fair, a cork warehouse of considerable size and good appearance, has recently been erected in Lant-street, Borough, for Mr. Thomas Peet. The building is faced with white Suffolk bricks, jointed in black mortar, red and black bricks being introduced in the bands and arches. The cornice is also executed in white moulded bricks. The whole of the facings were supplied from the Woolpit kilns, by Mr. C. Stutter.

The warehouse has a frontage in Lant-street, of 45 ft., with a depth of 65 ft. The goods entrance is situated in Vine-yard. The total height of the building from the basement floor is 71 ft. 6 in., and 60 ft. from the pavement level. The floors are carried on girders, 12 in. deep, supported by two tiers of 8 in. cast-iron columns, bolted together, and running the entire height of the building. Internally the warehouse is fitted with every convenience to suit the requirements of the trade. The contract was taken by Mr. Walton, of Museum-street, and the total cost was about 4,000*l.*



CORK WAREHOUSE, LANT STREET, SOUTHWARK.—Mr. Joseph S. Moye, Architect.

GERMAN CHURCH DOORWAYS.

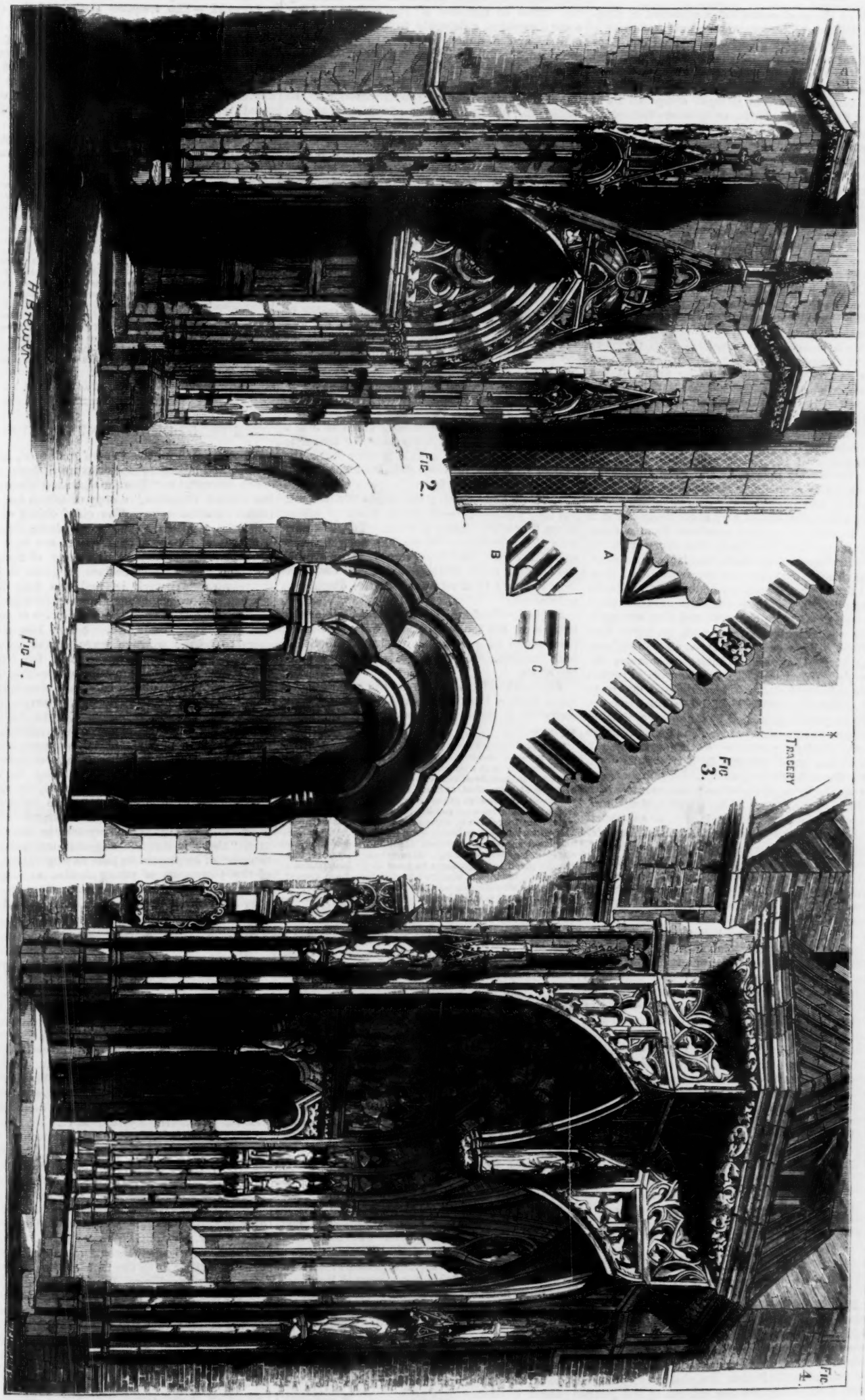


Fig 1.

GERMAN CHURCH DOORWAYS.

EVEN the most enthusiastic admirers of English Gothic architecture must admit that there is one point in which we were far behind our Continental neighbours in the Middle Ages, and that is the treatment of church doorways. Those who have stood before the fronts of Wells and York, and have in thought compared them with Notre Dame, Paris, or Ratisbon Cathedral, cannot help being struck with the fact that the Continental fronts owe much of their superiority to the great dignity and importance given to the doorways. At Ratisbon this is singularly the case, for the great doorway is perhaps the only really well-designed feature of the whole front; and yet who can help being struck by the grand and dignified effect of the whole?

The German architects do not seem to have turned their attention to this feature so early as the French; but when they did they made up for lost time by making the doorways the chief feature in their buildings.

The Romanesque churches in Germany have generally plain doorways with a tympanum, which is sometimes ornamented with carving; but is more commonly left quite plain. A very fine and rich example is to be found at the Scotch Benedictine Church at Ratisbon. In Transitional and First Pointed doorways the trefoil arch is frequently used generally, without the tympanum. Fig. 1 is a good specimen from the cathedral at Würzburg. The detail is singular. It is not until the fourteenth century that we find the double doorway; and even then they are never so common in Germany as in France; however, at this period the doorways are generally very lofty, and of very noble design. Fig. 2 is a remarkably elegant specimen from a desecrated church at Würzburg. The doorway in the south tower of Cologne Cathedral is about the same date. The doorways to the transepts at Ratisbon and Erfurth cathedrals are double, and are noble examples. Later in the style double doorways become much more common, and they are generally very highly adorned with sculpture and foliage. Fine examples exist at Nuremberg, Augsburg, Ulm, and Münster cathedrals; St. Mary's, Würzburg; Thein Church, Prague; Ochsenfurth, &c., &c. Third Pointed doorways are generally double if of large size, and are very frequently protected by a kind of projecting canopy or suspended porch. The finest example is the western portal of Ratisbon Cathedral, where the porch projects in a triangular form from the wall of the church, and is supported at the angle by a pier profusely ornamented with statues, carving, &c. At St. Ulrick's, Augsburg, the porch is semihexagonal, and is supported upon two slender piers. At St. Martin's, Landshut, is a doorway, the porch over which forms two triangles in plan (see Fig. 4), and is unsupported by either pier or shaft: the part forming the junction of the two triangles hangs down and forms a pendant. The detail of this doorway is very rich and beautiful. The church to which this doorway belongs contains four others almost equally elaborate, although the building itself is very plain and simple. After the fifteenth century, the Germans appear to have given up large doorways. The late Gothic specimens are generally small, single, devoid of sculpture or carving, and simply ornamented with interpenetrating mouldings. Sometimes the heads of these late doorways are most singular and eccentric in form, and are nearly always very ugly. This kind of doorways continued in use until the revival of Classical architecture at the end of the sixteenth century. The drawings we give have been made on the spot for us by Mr. H. W. Brewer.

REFERENCES.

1. Doorway, Würzburg Cathedral.
   a. Moulding stop to jamb.
   b. Moulding stop to arch.
   c. Impost.
2. Doorway to desecrated church at Würzburg.
3. Arch-mould of the same.
4. Doorway, St. Martin's Church, Landshut.

THE TRADES MOVEMENT.

Illegality of Trades Unions.—At a numerously-attended meeting of trades society delegates, held at the Sussex Hotel, Bouverie-street, Fleet-street, in relation to the late Trades Reform Demonstration, at the conclusion of the regular business, Mr. G. Potter, the chairman, brought before the delegates the subject of the recent decision given in the Court of Queen's Bench, by which trades unions were held to have no power to recover by law any sums of money that might be embezzled from their funds by any officer or member of the society. After some discussion, a delegate from the plasterers moved, and a delegate from the carpenters seconded, the following resolution:—"That the Working Men's Association be and is hereby empowered by this meeting to convene a meeting of delegates from the trades societies of the metropolis, for the purpose of taking into consideration the position in which trades unions are placed by the recent decision in the Court of Queen's Bench in the case of the Boilermakers' Society, and to determine the course to be adopted thereon." The resolution was unanimously adopted.

Coventry.—The members of the Operative Bricklayers' Society have given three months' notice to the masters, dated January 1, that they will discontinue working under the present rules. They require the second rule to be expunged, and ask for a slight alteration in their wages. The secretary to the Coventry Builders' Association, replying to this demand, states in effect that the masters see no cause for any alteration in the rules, but are willing to submit the matter in dispute to arbitration, under Rule No. 1.

The Potteries.—The carpenters and joiners of the Staffordshire Potteries have given notice to their employers of a demand for an advance of 6d. a day in their wages, raising them to 30s. a week, and a reduction of the hours of labour to the extent of two and a half hours a week, the change to come into operation on the 1st of May. The builders, in reply, have offered the men 6d. an hour, making the wages 29s. a week, but they decline to reduce the hours of labour below fifty-eight hours a week. The difficulty with the bricklayers, which has been pending since May last, and has ever since prostrated the building trade of the district, has only just been removed by a reference of the dispute to arbitration.

Stafford.—Professor Levi has been giving his lecture on the condition of the working classes, from which we quoted last week, in the Shire-hall, Stafford. The Earl of Harrowby occupied the chair.

Plymouth.—In reference to the trades movement here, a local paper, referring more especially to a threatened strike of the masons, says,—

"There is abundant evidence daily produced by the press to show that the state of trade in almost every part of the country is in a lamentable condition of depression; there are thousands of men out of work; and the distress consequent upon that, as much as upon the recent severe weather, has been so great everywhere, that the benevolent of all classes who can help have united in one great endeavour to relieve it, and prevent wholesale starvation. The privation and suffering found to exist in this neighbourhood as well as elsewhere, through want of food and clothing, has been startling. Money has, therefore, been readily given in large sums to provide the necessaries of life; soup, bread, and blanket societies have been opened, and have daily distributed their needed benevolence. In the midst of all this, it does sound disgusting to hear of a "strike" by men amongst whose class this suffering exists, and to relieve whom this profuse benevolence has been granted. For the sum of 6d. a day extra—which they have yet to prove they are fairly entitled to—they will stubbornly throw themselves out of work at this critical period! The course those operative masons propose to pursue in this particular is certainly very short-sighted on the part of themselves, and inconsiderate and ungrateful to the public to say the least of it. It has especially annoyed those workmen who are solicitous for the success and reputation of trades unions in general, and who are most anxious to disabuse the public mind of an impression which is widely entertained, namely, that trades unions, as a whole, are but a means through which one class of workmen seek selfishly to promote their own interests at the expense of all other classes of workmen."

Blackburn.—The wages agitation in the iron trades has extended to Blackburn. The whole of the Amalgamated Engineers — comprising engineers, smiths, mechanics, dressers, joiners, &c., and the iron-moulders employed in Blackburn and its immediate vicinity, with the exception of those employed by Messrs. Yates, Canal Foundry, and Messrs. Clayton & Goodfellow, Park-road, have received notice that on and after the 2nd and 4th of February next, those earning 25s. per week will have their wages reduced 1s. per week. The earnings of the rest will not be for the present interfered with. A meeting of the Amalgamated Engineers has been held on the whole question. Eventually a resolution was agreed to, to the effect that if the employers persisted in making the reduction proposed, the operatives would as a body refuse to work more than four days per week so long as that reduction was kept in operation. The iron-moulders also met, and passed a similar resolution. It is calculated that there are from 4,000 to 4,500 men engaged in the iron trades of Blackburn and district, whose average earnings are about 28s. per week, though a majority of the artisans get 32s.

Limerick.—The frequent strikes of the dock labourers in Limerick and their demands, it is thought, will have the effect of diverting the import trade of that port to other localities, as serious injury has already been inflicted on the trade of the port. The men have demanded 10s. a day on some occasions, and have now organised a society to maintain them in these demands.

New York.—In speaking of the distress in New York arising from strikes and other causes, a local paper says,—

"The Poor Association state that there are hundreds and thousands of good mechanics, artizans, and labourers in New York who formerly had permanent situations but are now left to the precarious subsistence afforded by occasional jobs, and who owe their infelicitous position and the sufferings of their families to the system of strikes which has become so fatal a habit with certain classes of labouring men. . . . . In New York and Brooklyn there has been a perfect mania on the subject of strikes. The painters, the harnessmakers, musicians, lightermen, 'longshoremen, carpenters, masons, plasterers, plumbers, all sorts and conditions of men, followed the example of the car-drivers, and generally attained the same measure of ill-luck for themselves and their wives and children. The community would be startled if they knew the vast numbers of unemployed men, the sick-hearted women, the hungry, shivering children that are at this time in the city of New York."

THE TRADES MOVEMENT IN SYDNEY.

DELEGATES from the joiners', painters', bricklayers', and labourers' societies in Sydney have sent a memorial to "The Amalgamated Society of the United Kingdom," a copy of which has also been forwarded to us. The chief object of the memorial appears to be to disabuse English workmen of the idea that wages are high and work abundant in the colony or city of Sydney. On the contrary, they declare, a great deal of distress exists; work is, and has long been, scarce; and wages, though apparently high, are really inadequate, from the high price of provisions, clothing, rents, &c. 8s. to 10s. a day seem to be the average wage in the building trades, while rents are something like 10s. to 20s. a week; bread 10d. a 4-lb. loaf; cabbages 8d. a-piece; milk 8d. a quart; bacon and cheese 1s. 6d. a lb., and so on. Beef and mutton, however, do not seem to be so dear, being only 5d. per lb. It is remarkable that, while our own workmen not only complain of masters taking more than a certain very small number of apprentices, but absolutely restrict them from doing it, compelling them, by threats of strike, to reduce the number of apprentices to the minimum; one of the causes of complaint urged in this memorial as being "of a very serious nature," is that "there is not the slightest inclination on the part of employers to take as apprentices any of the thousands of young Arabs, as they are colonially called; and the consequences are that they are entirely dependent on their parents."

EQUALIZATION OF THE METROPOLITAN POOR-RATES.

A DEPUTATION to the President of the Poor-law Board, composed of the representatives of various ratepayers' associations, boards of guardians, and other bodies connected with the East of London, waited upon Mr. Gathorne Hardy, at the offices of the Board, Whitehall, on the subject of the equalization of the poor-rates in the metropolis. The deputation included Mr. Locke, M.P., Mr. Ayrton, M.P., Mr. Buxton, M.P., Sir C. Bright, M.P., Mr. Hanbury, M.P., and Mr. Alderman Salomons, M.P. Mr. Earle, M.P., the Secretary of the Poor-law Board, was present. The deputation was introduced by Mr. Ayrton, M.P., and Mr. Alderman Salomons, M.P. The important subject in question was ably urged by various speakers, and especially by the Rev. Mr. M'Gill, rector of St. George's-in-the-East, who presented a memorial from his district setting forth the facts of the case, which were really appalling. In the large district of Shoreditch half the men are now out of employment, and the consequence is a rating of the poor is made higher and more difficult to collect. In some of the parishes in the West-end the poor-rate is only sixpence in the pound, while in Bethnal-green and the surrounding parishes it is 3s., 4s., ay, and in some cases, 5s. 6d. The memorial urged the justice and expediency of having an equalised rate on the whole metropolis, which would amount to a uniform sum of

about 1s. 5d. in the pound. There were five parishes in this great metropolis which really did not contribute justly or fairly to the relief of the poor. These were the City of London, St. George's, Hanover-square, Paddington, Islington, and Kensington. He did not believe the wealthy inhabitants of these districts wished for such a state of things, because during the late distress they subscribed cheerfully and liberally to the poor of the East-end an amount which he had no hesitation in calling "conscience money," because they paid generally but 6d. in the pound for poor-rates, while the parishes in the East were compelled to give 5s. 6d. Sir Charles Bright, M.P., drew attention to the bread riots in the east of London, which, though highly reprehensible, really arose from the inequality of the rates and the undue and intolerable pressure on the ratepayers of the East-end, and showed that an equalization was urgently called for, and he hoped they would cordially support him. In reply, Mr. Hardy said that early in the ensuing session it would be his duty to state what the Government proposed to do. His attention would be particularly directed to the question of management and the uniformity of assessment, and a great many others, that in a week or two he should bring before the House of Commons.

At a conference held at the London Coffee-house, on Wednesday night, on the subject of equalising the poor-rates of the metropolis, a resolution was passed to the effect that in the opinion of the meeting the time had arrived when it was the duty of the Government to introduce a Bill for the equalisation of the poor-rates within the metropolitan district, and a deputation was appointed to wait upon the Poor-law Board to impress the great importance of this measure upon the Government.

EXHIBITION OF ARCHITECTURAL DESIGNS.

WE are requested to state that the exhibition of the National Gallery designs will not be closed till after the opening of the exhibition of the designs for the New Courts of Justice to the public. Architects from the country will thus have an opportunity of seeing both exhibitions without being detained in town. Many will feel much obliged by this arrangement of the Chief Commissioner of her Majesty's Office of Works.

EFFECTS OF SANITARY IMPROVEMENTS.

THE report of the committee of the Leek Burial Society gives some important statistics *apropos* of the improvement of the sanitary condition of Leek. The members of this society compose a large proportion of the poorer inhabitants of Leek. Mr. R. Farrow had been requested to analyze the public documents of the Society during the last six years' experience out in comparison with the six preceding years, showing the results of the public drainage and other improvement works, which had now been in operation six years.

"During the first six years the mean number of members was 5,178, and the total number of deaths 984, the annual rate of mortality being a little over 30 in 1,000 of the living, and the total expenditure in funerals 3,387*l.* 8s., which was 13s. 1d. to each living member. During the latter six years, the mean number of members was 5,988, and the total number of deaths 608, the annual rate of mortality being 17 in 1,000 of the living, and the total expenditure in funerals 2,433*l.* 2s., being 8s. 1½d. for each member."

He found on further analysis that,—

"The actual decrease of the number of funerals, corrected for the increase in the number of members, was 475, and that the actual decrease in mortality was 13 in 1,000 of the living, the increase in the value of life being 8½ years to each person, and the total amount saved in funerals, corrected for the increase of members, 1,630*l.* 4s. It was found by experience that twenty-five cases of sickness attended each death, and, therefore, the number of weeks' sickness prevented amounted to 49,400; and supposing every case of sickness to cost 10s., which was a very low estimate, this represented a saving of 5,937*l.* 10s. It was also found by experience that one-third of the total amount of sickness and mortality among the population occurs between the ages of fifteen and fifty-five years, and if the earnings of this portion of the members were estimated at 10s. per week for males, and 5s. for females, the loss of wages prevented amounted to 6,174*l.* 15s., which, with the actual saving in funeral expenses, and the estimated cost of sickness prevented, amounted to no less a sum than 13,742*l.* 9s. This saving was not prospective, but had actually taken place. There were various other items which ought to have been brought in, but which had been omitted, and taking only the three named, it would, provided that this experience continued during the mean after-life of the present members, result in the saving of 61,978*l.* 10s., besides the addition of 8½ years to the life of every member. This experience was not confined to the members of this society alone, as the increased value of life in the whole population of the town had been more than seven years during the same period, the mortality being, for the first period, 31 in 1,000, and for the second period, 22½ in 1,000."

The poorer classes of the people were, he contended, the greatest savers by sanitary improvements, and the greatest losers where sanitary matters were neglected. He found, as a general rule, that he experienced little difficulty in convincing the poorer classes that filth and squalor were attended with the worst possible results, pecuniary and otherwise, both to themselves and the public. He had not been so fortunate in convincing some of the wealthier members of the community.

CAPE TOWN SCHOOL OF ART.

WE are glad to learn that the Exhibition made by the School of Art at Cape Town at the close of last year was a great success. More than 2,600 people visited the rooms, and the distribution of prizes at the end of the Exhibition week was a capital wind-up to the whole.

The judges who awarded the prizes said in their report:—

"Taken as a whole, these works are highly creditable to the students and their master, Mr. Lindsay. We wish especially to notice the excellence of the system, which discourages all meretricious and pretentious work and mere artistic display, and which tends to develop taste and talent in the practical shape which can benefit the architect, builder, and mechanic."

Especial interest was excited in one of the students, John Brown, a youth both deaf and dumb, but who had evinced such a precocity that he had been taken from one of the orphanages of the city by Mr. W. de Smidt, and placed under the tuition of Mr. Lindsay. At the conclusion Mr. Lindsay presented to Mr. Foster, the founder of the school and its honorary secretary, an address and a silver inkstand, purchased by subscription amongst the students.

COMPENSATION CASES.

THE following cases have just been decided in the Mayor's Court, Guildhall:—

(Before the Right Hon. Russell Gurney, Q.C., M.P., Recorder, and a Special Jury.)

WADMORE *v.* H.M. POSTMASTER-GENERAL.

Mr. Locke, Q.C., M.P., and Mr. Harrison appeared for the claimant; Mr. Coleridge, Q.C., M.P., and Mr. Collier for the Post-office.

Mr. Locke said that the claimant in this case was the Rev. H. R. Wadmore, who was the freeholder of the house No. 26, St. Martin's-le-Grand, which was to be taken down for the purpose of enlarging the General Post-office. The property, which was known as Williams's Coffee-house, had been in the possession of the family for many years. In 1859 a new lease was granted for seven, fourteen, or twenty-one years, at a rental of 150*l.* per annum, terminable by the tenant at seven years, and by either landlord or tenant at fourteen years. If it were now in hand it would let for double the money. There were six years and three-quarters unexpired of the term of fourteen years. He believed that the jury would find that to be worth some 872*l.* What would the premises be worth per annum at the end of the unexpired term of six years and three-quarters? That was really the only question which the jury had to consider. He should call several experienced witnesses, who would state that the premises were really worth at least 300*l.* a-year. If the jury were of that opinion, the claim would come out at a sum of somewhere about 5,700*l.*

Mr. Trist (Norton & Trist), Mr. E. H. Burnell, and Mr. E. Farmer (Debenham, Tewson, & Farmer) all valued the premises at 300*l.* a year, and, according to their evidence, the claim varied from 5,188*l.* to 5,700*l.*

Mr. Coleridge then addressed the jury, and said that they had been brought there solely at the instance of Mr. Wadmore, because, in the first instance, he sent in a preposterously exaggerated claim. The highest that the Post-office authorities could make of it was 4,800*l.*, while Mr. Wadmore sent in a claim for 10,120*l.*

Mr. Clifton, Mr. Vigers, and Mr. Shaw valued the property at 200*l.* per annum, and the entire claim at 4,083*l.*

The jury, without troubling his Lordship to sum up the case, returned a verdict for 5,000*l.*

(Before Mr. Commissioner Kerr and a Special Jury.)

FLIGHT *v.* THE METROPOLITAN RAILWAY COMPANY.

This was a claim for the leasehold interest in the house and premises, No. 40, Broad-street-buildings.

Mr. Huddlestone, Q.C., and Mr. Philbrick appeared on behalf of the claimant; Mr. Lloyd and Mr. Hollway for the company.

From the opening statement of counsel it appeared that the premises in question were held upon lease by the claimant, from the Corporation of London, of which fifteen and a quarter years were unexpired at Christmas last, at a rental of 200*l.* per annum. The total claim was valued at from 3,850*l.* to 5,606*l.*

Mr. Ellis (Gadsden & Ellis) valued the property, to let as offices, at 825*l.* per annum. From that he deducted the reserved rent of 200*l.*, and a further sum for repairs, rates, taxes, &c. He capitalised the improved rental upon the 6 per cent. tables, to which he added 10 per cent. for forced sale, making the total claim 4,800*l.*

Mr. St. Quintin (St. Quintin & Notley) expressed his opinion that the premises, let out as offices, would fetch 822*l.*, from which he deducted the reserved rent, 200*l.*; repairs and contingencies, 164*l.*, leaving a net improved rental of 458*l.*, which, capitalised on the 6 per cent. tables, with the addition of 10 per cent. for compulsory sale, brought out a sum of 4,662*l.*

Mr. H. E. Murrell made the total claim 3,850*l.*

Mr. Farmer (Debenham, Tewson, & Farmer) valued the claim at 4,648*l.*, and Mr. Fletcher at 5,604*l.*

Witnesses were then called on behalf of the company.

Mr. G. Pownall and Mr. John Shaw valued the claimant's interest at 2,200*l.* Mr. E. N. Clifton at 1,980*l.*

Mr. E. Ryde thought that the premises might let as offices for 650*l.* per annum, from which he deducted 200*l.*, the rent reserved, and 115*l.* for repairs, rates, and taxes, leaving a net improved rental of 235*l.*, which he valued at 2,208*l.*

Mr. Clark (Farebrother, Clark, & Co.), gave similar evidence. He said that chamber property was not now so valuable as it was. Everything was inflated for a time, but they were now assuming a more natural state.

The jury awarded the claimant 2,550*l.*, the loss of rent and value of fixtures to be settled out of court.

(Before the Right Hon. Russell, Gurney, Q.C., M.P., Recorder, and a Special Jury.)

SHEPPARD *v.* THE METROPOLITAN BOARD OF WORKS.

Mr. Hawkins, Q.C., and Mr. Talfourd Salter represented the claimant, and Mr. Lloyd the Board of Works.

Mr. Hawkins said the claimant, Mr. William Henry Sheppard, had for a period of between twenty and thirty years carried on the business of a bellhanger, locksmith, gasfitter, &c., with a very considerable amount of profit, upon the premises, No. 10, Bucklersbury, which premises were required by the Metropolitan Board of Works, for the purposes of the new street from Blackfriars Bridge to the Mansion House. Mr. Sheppard had the good fortune in 1861 to obtain from Mr. Nash an agreement to let the premises from the expiration of his lease for a further term of twenty-one years, at the almost nominal rental of 80*l.* per annum. This lease would expire at Midsummer, 1883. Of the lease sixteen years and a half were unexpired at Christmas last. Notice to treat was given in July, 1866, and a claim was sent in amounting to 4,000*l.* After thirty years of persevering industry, the claimant's business now yielded a net profit of 750*l.*

The jury awarded the claimant 3,192*l.*

(Before Mr. Thomas Chambers, Q.C., M.P., the Common Serjeant, and a Special Jury).

ROBB AND DOW *v.* HER MAJESTY'S POSTMASTER-GENERAL.

This was a claim for the leasehold interest of the house No. 33, St. Martin's-le-Grand, where the claimants carry on business as surgeons and chemists. There was also a claim for removal, fixtures, loss of business, &c. &c. The house forms part of the property required for the enlargement of the Post-office.

A verdict was taken by consent for 2,500*l.*

(Before the Right Hon. Russell Gurney, Q.C., M.P., and a Special Jury.)

SPON AND ANOTHER *v.* THE METROPOLITAN BOARD OF WORKS.

Mr. Giffard, Q.C., Mr. Britcher & Mr. Horace Lloyd appeared for the claimants; Mr. Lloyd for the Board of Works.

Mr. Giffard, in opening the case, said that the claimants, Messrs. F. N. & W. Spon, were engaged in the book trade, which they inherited from their father, and which was formerly carried on in Queen-street, Cheapside. In 1850 they took a lease of their present premises, No. 16, Bucklersbury, of which four years would be unexpired at Lady-Day next, at a reserved rental of 105*l.* Upon their removal to the new premises in Bucklersbury, which were now required for the new street, they began a business of a very peculiar kind, viz., that of publishing and trading in books of a purely scientific character. Any person requiring any book in relation to any of the arts or sciences was sure to be able to procure it at "the shop in Bucklersbury." In fact, the claimants were the only publishers engaged exclusively in carrying on such a kind of business within the walls of the city. Their profits, during the first year of their business operations in Bucklersbury, were 400*l.* During the seventeen years their profits had risen to 1,300*l.* or 1,400*l.* They started with a stock worth 500*l.* Their present stock was worth 5,000*l.* The claimants let off the first, second, and fourth floors, at an aggregate rental of 110*l.*, so that, in fact, they carried on their business there rent free. With every desire to get suitable premises near to their old spot, they had been unable to succeed. The claimants would have to cancel the title pages in all their stock in order that the proper address of the publisher might be inserted. They only sought an indemnity, and not a profit.

It transpired that the original claim sent in was for for 7,700*l.* 0s. 3d.

The jury awarded the claimants 2,750*l.*

SHOP FRONTS.

THE ARCHITECTURAL ASSOCIATION.

AT the meeting of this Association held on Friday evening (the 18th ult.), at the House, in Conduit-street, Mr. Michael (Burton-crescent), was elected a member.

Mr. T. Blashill, in submitting some notes on Shop Fronts, observed that to a nation which had been termed a shop-keeping people the question of shop fronts was one of some importance and interest. The shop differs from the office and the warehouse in which goods are sold wholesale, either by sample or in bulk, and which require to be in a convenient rather than in a public situation. The shop depends upon retail trade, possibly upon casual customers, and it must be in a public situation, so as to attract business by its display of goods. We find the types of our modern fronts in the open-fronted shops of eastern and southern countries, and in the stalls of continental fairs, in which the sole shelter is given by a shutter which is hinged above; and being propped open affords shade by day, and being let down closes in the front at night. The first effect of the introduction of glazing was to diminish the convenience with which goods could be examined from the street;

but by the use of large squares we have regained the original convenience, with the most complete protection from weather and other sources of injury. The front, as we ordinarily see it, being a necessity of trade, it is useless to exclaim against it on artistic grounds; the whole elevation of the building should take its character from this, which is its most important part. There are two parts of a shop front. First, the structural arrangement of piers, columns, and bressummer, or arches which carry the superstructure—equivalent to the whole construction of ancient fronts; and, secondly, the more modern sash and its framework, which is merely a fitting of no permanent character. In construction, the bressummer is to be preferred to the arch, which requires abutment, for each building should be able to support itself without the aid of adjoining houses. Very wide spans are unnecessary, for the size to which plate-glass can be obtained at moderate cost is limited, and sash-bars are necessary. These, however small, disturb the eye, and should be dispensed with to a great extent, so that the sheets of glass may be joined only at the columns which help to support the bressummer. Columns may then be more numerous, for one of 6 in. diameter will interrupt the view less than two sash-bars of 1½ in. each. It is an error, in fronts of importance, to put the glass out to the utmost limit allowed by law. It is often better to place it behind the columns.

The increasing value of the basement has an important effect on the arrangement of shop-fronts, for it requires to be well lighted and ventilated, and therefore the stall-board should not be made too low. It is useless to place small objects so low that they cannot be closely examined without stooping, and larger objects can be so placed that a stall-board of 2 ft. in height is not too high for them. There should be a narrow glazed grating over the area, and a window of rough glass to the basement. There should be no step at the door. Glass shelves are to be preferred. Silvered glass should never be so placed in a front that it reflects the figure of the observer or objects in the street: its office is to enhance the appearance of the wares. The window-fittings should be designed by the architect with reference to the particular trade. As to gas-lighting, generally a large quantity of light reflected from white surfaces, or coming through ground glass, is favourable to the appearance of goods in respect of their colour and texture; but when their beauty depends upon their glistening appearance, light from naked flame is best. Inscriptions are intended to be read and should be as clear as possible, and not in queer characters which give trouble to those who are searching for a particular house. Signs speak all languages. No man has a right to make his shop difficult to find, inconvenient to examine, or awkward to enter; trivial things keep away hesitating customers, and their entry is essential to the proper and reasonable objects of the tradesman.

Mr. Blashill treated at length of plans, sections, fittings, and minor details, which however trivial in appearance have great influence on the success of that portion of the tradesman's premises which is often his sole means of introduction to the public by whose custom he must live.

A member observed that he quite agreed with Mr. Blashill in recommending that shop fronts should be set back two or three feet if possible, and referred to some cases in Throgmorton-street, where the plan had been carried out with the best effect. He also called attention to a new shop-front which had been put into a baker's house in New Bond-street. The proprietor had stoutly resisted the innovation of plate-glass, mahogany, or metal sash-bars and other improvements for more than half a century, but had at length conformed to the spirit of the age; and the result was a very handsome front, with not only plate-glass, but also coloured marble pillars, and some exceedingly tasteful metal work.

The chairman (Mr. J. D. Mathews) thought the first thing an architect ought to do in designing a shop-front was to take his client's opinion, who, in all probability, had thought much over the matter, and had studied the effect of other fronts in his neighbourhood. For his own part, he (the chairman) did not admire a front composed of one large sheet of glass. Such a sheet of glass was, in the first place, very expensive; the risk of putting it up was considerable, and the cost of insuring it was also a consideration. Moreover, he thought the sash-bars were an improvement in this sense, that they relieved the eye, and at the same time enabled the shop-keeper to arrange his goods in a more convenient manner. With regard to steps up to shops, he deprecated them to the full as much as Mr. Blashill, and experience showed that the public did not like them.

Mr. Ware (an American professor of architecture now in London) observed, that for some years past the custom had prevailed in New York and other cities of the States, to do away with shutters altogether, especially in buildings containing valuable property, such as banks, jewellers' stores, &c. When business was brought to an end for the day, the curtains were drawn up, the gas was lighted, and there was nothing between the street and the interior but the plate-glass. The consequence was, that no one ever thought of breaking in by the front, while if any one were to get in from behind, the police would at once detect him. This principle had been tried with the greatest success, and robberies were very uncommon.

After a short discussion, a vote of thanks was passed to Mr. Blashill.

A member brought under notice the propriety of discussing the manner in which the Peabody Trust had been administered. He understood that the subject had been discussed at the Institute, but with what result he did not know; but it seemed to him that the benevolent intentions of the donor had not been carried out, and that the funds had been diverted from the purpose for which they were originally intended. The object which Mr. Peabody had in view was to provide decent dwellings for the very poorest workers; yet this was the very class which was virtually excluded from all participation in the fund. Indeed, so patent was this fact that he doubted whether a Court of Equity might not be induced to interfere, in order that the intentions of the founder might be carried out.

Mr. Edwards said the subject was one of great interest, and expressed a hope that it might be discussed by the Association.

The Chairman said that Mr. Darbishire, the architect of the Peabody buildings, had attended at the Institute, and had made explanations which were deemed to be satisfactory. The question now mooted had been incidentally raised in the paper read by Professor Kerr at the Institute; but as the trustees of the fund appeared to be satisfied with its application, he feared no good would result from the discussion of the subject by the Association.

FROM SCOTLAND.

Ayton (*Berwickshire*).—The new parish church has been opened for divine service. It is now more than three years since it was considered that, owing to the dilapidation of the old parish church at Ayton, it was desirable that steps should be taken for having a new one erected. The heritors of the parish had several meetings, and Mr. Wardrop, of the firm of Brown & Wardrop, architects, Edinburgh, was appointed to report, and in consequence of his report it was determined that a new church should be immediately erected. The necessary steps were taken, and the foundation-stone was laid on September 8, 1864, by Mrs. Mitchell Innes, of Ayton Castle. The locality selected for the erection of the church is a piece of ground near the toll-house, at Ayton, given by the lord of the manor. The style adopted is the Early English of the fourteenth century, and the edifice consists of a nave, with south transept and side aisle. The exterior is built with free dressed stone, and the principal entrance, which is at the south-west angle, is surmounted with a *broached* spire, 120 ft. high. On the north-east side is the vestry. The gallery is at the west end of the church. The roof is open, and the church is heated with double rows of hot water pipes, laid along the aisles. At the east end of the chancel there are three twin-light windows, all with tracery, and representing the Six Acts of Mercy. The south transept window consists of four upright lights and tracery. The subject is "The Adoration of the Magi and the Shepherds," who are represented offering their gifts to the infant Saviour. The north transept window consists of three upright lights and tracery. The subject is Christ's Sermon on the Mount. There is a large wheel-window at the west end of the church, which is filled with geometric and foliated glass. The other windows in the church are filled with cathedral glass in quarries, with coloured borders. The windows are from the manufactory of Messrs. Ballantine & Son, of Edinburgh. The contractors for the different works in connexion with the church were:—For the mason-work, Mr. James Berry, Ayton; joiner-work, Messrs. Turnbull & Son, Stow; slater and plasterer work, Mr. George Whitlaw, Ayton; plumber-work, Mr. R. Sidey, Berwick. The architects were Messrs. Brown and Wardrop, Edinburgh; and the clerk of the works Mr. Taylor, Edinburgh. Mr. Mitchell Innes has been at the entire expense of the windows, besides incurring a great deal of other expenditure. It is estimated that the total expense of the church will be 10,000*l*.

DUBLIN.

An extensive building, designed partly for hotel purposes and partly as a commercial establishment, is in course of completion at the junction of Lower Sheriff and Guild streets, Dublin. The frontages to the above-named streets are respectively 40 ft. and 60 ft.; and the height to ridge about 55 ft. On the exterior of the ground floor is a series of French rusticated piers, separating the window and door openings, and surmounted by an ornamental entablature in cement, with vases over each pier; and above rise two other stories, in a superstructure composed of red bricks, with Ferguslie white brick quoins, dressings, &c. A belting course of granite, encaustic tiles, and white brick separates the first from the second floor; and a deeply moulded and bracketed cornice, with steep cantilever roof, ornamented with scolloped slating and metal crestings and finials (from the Sun Foundry, Glasgow), and displaying a series of dormers to light an attic story, crowns the whole. The angle is bevilled off and surmounted by a clock structure, with encaustic tile panelling. Ten of Clark's patent self-coiling steel shutters inclose the openings on the ground floor. Mr. Lyons is the architect; Mr. Stephen Breen is contractor for the brick and stone work; and Mr. Rearney for the plastering. Mr. Connolly is foreman of the works.

RENDERING THE FACE OF FLUES.

METROPOLITAN BUILDING ACT.

On the 15th ult. Messrs. Warne & Co. were summoned before Mr. Flowers, at Bow-street Police Court, for not having complied with the requisitions of a notice served by the district surveyor of St. Giles's.

It appeared that the work complained of was in a building erected by defendants in Gate-street, Lincoln's-inn-fields, for the use of the company, Messrs. Day & Sons. The brickwork internally was not plastered, and the district surveyor required that the portion forming the outside of the flues should be rendered, according to sec. 20, rule 4, of the Act.

For the defendant it was contended that the rendering of the outside was not required by the rule in question, which was worded in such a confused manner as to be unintelligible. The District Surveyor admitted the meaning of the rule was obscure, but contended that it must have *some meaning*, which he must leave for the decision of the magistrate.

On the 22nd instant, Mr. Flowers having taken time to consider the matter, gave his judgment:—"That the inside of every flue must be pargetted, or lined with fireproof piping, and the back or outside (unless forming part of the outer face of an external wall), must be rendered."

THE "OVER-HEATED FLUE" MISERY.

The great importance of the subject makes me think that the following little budget of experiences may not be unacceptable:—On a small scale they are, perhaps, a history of "how these things are done" on a large one. I have for some eight years past had my house partially warmed by hot water. There were concerned in doing the work, or advising upon it, a presumed "expert" who had dabbled in a patent for a stove, a practical worker in metals, and a bricklayer: besides this the employer, who had some experience in architecture, had heard what was to be said upon the subject by other persons willing to be employed, but rejected on the score of expense or otherwise.

One result of our united wisdom was the erection of a flue to our furnace, composed of glazed drain-pipes, which, curving over near the boiler, runs some 10 ft. nearly horizontally. This had not been in use very long before a conspicuous crack made its appearance in that length of pipe which formed the bend.

Without removing anything, I had the whole horizontal flue "jacketed" with bricks and tiles laid in fire-clay. I think the workmen mixed fine ashes with the clay. All has hitherto gone on without accident. There have been, however, conspicuous cracks in the outer surface of the fine clay, where it is used as a compo over the bricks. I dissected some of the work a few days ago, where some cracks were very obvious, facing upwards towards the wooden floor which stands overhead. It seemed to me that the fire-clay, where inclosed in the tiles, was not nearly so hard as on the outer surface where applied as a compo. Neither did it adhere well, for I easily scraped down to the drain-pipe within, which was bright and fresh. I draw the conclusion that the pipes are tolerably trustworthy when used for flues, provided that, while heated within, they are well shielded from the contact of cold air without. Further than this, I suggest as a subject for experiment, whether the cements, &c., found to resist the most intense heat, when used for fire-work on temporary occasions, as Stourbridge clay, founders' loam, do not habitually deteriorate with continual use in course of years in a flue.

With regard to the steps an architect should take in arranging with a contractor for heating apparatus, I suggest that the road to safety lies in this direction, namely, allow so much room for the flues and their surroundings, that a mass of earth may be placed sufficient by falling in over a cracked flue utterly to smother, choke, and extinguish the flame; furthermore to insist that such earth shall be applied by the cart-load, if needed; for I apprehend the following source of opposition to the means of safety:—The person who makes up a fire likes to see a speedy result to his work; he has, therefore, a motive to prefer thin flues, that shall easily transmit the heat and diffuse speedy warmth. There may be no real economy in this, for a large mass of solid matter retaining its heat a long time, even after the fire has gone out, may be exceedingly useful; but the fire-maker cannot in this case perceive a quick result to his work, nor point out, "You see how soon this stove operates."

G. M.

P.S.—I take the opportunity of bearing testimony to the exceeding benefit, in point of health and comfort, of my hot-water pipes. Not to feel continually impelled to desert one's writing or drawing table, in order to shiver over a fire, and not to be thoroughly chilled in a cold bedroom, after leaving the warm fireside of a sitting-room, are a couple of negatives well worth some expense and trouble.

HOMES FOR THE MIDDLE CLASSES.

I PERFECTLY agree with your correspondent "W. A." (January 5th), and am delighted to see the subject of "Homes for the Middle Classes" taken up with such earnest discrimination. If some enterprising capitalist, and some sensible and able architect, will follow out "W. A.'s" suggestion, and erect handsome and spacious *Familistères* in the various quarters of London, they will not only do much to free this town from the reproach of being the ugliest and most inconvenient capital in Europe, but will confer an inestimable boon on thousands of persons holding a certain position in society, but whose limited though independent incomes make the choice of a suitable home a problem next to impossible to solve.

This class includes small annuitants, half-pay officers, rising or retired professional men with small families, or married couples with no family, to whom may be added daily governesses and other female teachers, obliged to live in expensive neighbourhoods,—all persons who neither require a whole house of ten rooms, nor are justified in incurring such an expense; yet, who, by education, connexions, and habits, are entitled to a more refined style of living than is within their reach under the present paltry English "Every-man-his-own-house" system of building, which has made of London a huge inartistic overgrown Hanoverian village.

They are, therefore, reduced to the uncomfortable expedient of taking upon themselves the responsibilities of a house beyond their wants and their means, and letting a part of it to strangers; or of renting part of a house, subject to perpetual annoyances, as well as to the dread of seeing their furniture and personal property seized for their immediate landlord's rent and taxes,—and, in either case, abdicating that home-independence which is one of those conventional myths that most Englishmen still believe in; but which is, in reality, only enjoyed by persons of good incomes—the upper one hundred thousand—as the number of small bills in parlour windows sufficiently prove.

Now "W. A.'s" proposal answers to this want in every respect; it is therefore earnestly to be hoped that it will not fall a dead letter. A few *Familistères*, the outward decorations of which will admit of every variety of style, while the inward arrangements will afford comfort and privacy to thousands such as the monotonous rows of little ill-built "self-contained" band-boxes called houses never can,—with the supplement of *restaurant*, baths, laundry, infant and preparatory schools, and other necessities which can only be brought within every one's reach by means of a large and comprehensive scheme,—such convenient buildings, I say, would secure at once their full complement of tenants; for in my circle, also, many "would rush to secure a chance of such homes."

But as one fact is better than a bushel of arguments, allow me to add that in our second visit to the *familistère* last September, our well-considered enthusiasm for this palace of labour only increased. The suite of apartments M. Godin-Lemaire courteously placed at our disposal were, in respect of dimensions, light, air, closets, stoves, &c., the counterpart of those which are inhabited by the least of his work-people; the only difference consisted in the papering, decorations, furniture, and so forth; and we may safely say that could we obtain six such rooms on one floor in London, we should think them cheap at 90*l.* or 100*l.* a year. We were in nowise inconvenienced by our neighbours, as the thickness of the walls and ceilings effectually prevented any sounds from reaching us, which is not often the case in London houses.

As all social reforms must ultimately fall into the hands of architects, to whom can we look for assistance but to you, sir, whose ably-conducted journal forms so essential a portion of their several professional libraries?

TITO PAGLIARDINI.

P.S.—I should be most happy to give financial details concerning the *Familistère* of Guise to any architect or capitalist interested in the subject.

EDUCATED PLUMBERS.

A CORRESPONDENT, "P. T.," complains, and with reason, of the assumption of the term plumber by men not duly qualified. He thinks the present would be a good time to test some of the whims exhibited by inventors of "closets." "Some say," he goes on, "that strength of work is the decay of trade. I believe it causes a great deal more trade to be done: it should be said bad work will create a new whim. It is economy to employ every man in his own capacity. Our class should understand the effect of temperature, atmospheric pressure with all the allowances, affinities in metals, rates of expansion, and all other technics necessary to make any building dry, and give plenty of water in frosty weather."

THE LIGHTING OF CHURCHES.

SIR,—I am glad to see the subject of lighting churches opened out in your columns, and hope that it may be taken up by abler pens than mine. The subject may naturally be divided into the consideration of the treatment of ancient and of modern churches.

The lighting of ancient churches is in itself rather a wide subject,—a subject that can only be generalised about, as each particular church may require a different treatment. Ancient churches were not designed to be lighted, at least in the manner we are now considering; for decorative effect on great festivals they were probably illuminated, but generally the old religion rather affected a gloom, that dim religious light we so often hear spoken of. Light was not required to enable the congregation to follow the service, and where light was required there it was concentrated; such as in the reading of the epistle and gospel, when lighted tapers were held for the officiating priest. Again, at the high altar many lights were constantly burned, partly for their symbolical signification, and partly for their use during service.

From this we may infer that to light an ancient church, the object would in olden days have been to have centralised most light in the chancel, and there, where the service is mainly conducted, will be found our most effective point for our most brilliant light, due provision being made, I need hardly add, that the practical use of our light is first effected, that of affording light to the congregation.

"J. E." in his letter speaks of a church as of various compartments, each one to be lighted as brilliantly as the other; and instances the lighting of a room of any size as a problem easily solved. But if that room be of irregular shape, or, as in a hall of justice, requiring peculiar duties to be transacted at a particular part of it, the simplicity of that problem is lost, and we find it necessary to light the room up,—lead up the light, as it were,—to one more prominent part; and so in a church, our object will be best effected by lighting up to one given point, and that, as before stated, the chancel or entrance to it. We may also infer that in brilliancy the various parts should be subservient, the nave to the chancel, the aisles to the nave. I think we may all agree that we should, if possible, make our light a handmaiden to our architecture, to bring it out and more clearly define its most salient points. To speak more definitely depends so much on the exact form of the church itself that one cannot say much. If the church is very lofty, with well-marked clerestory, the string-course of that clerestory seems fittest for the light: this has been effectively done in the choir of York Minster. If, on the other hand, the church is low and straggling, the nave piers suggest themselves as a basis for our lights. If, again, our nave is lofty and open, almost a preaching nave and without clerestory, coronæ seem best fitted to give that broad effect of light.

A string-course of light has always appeared to me the most effective method of lighting the chancel, if the string-course is of sufficient height; if the roof is vaulted, a corona. If neither can be had, I prefer standards. I have not mentioned standards for the nave, for the other methods suggested seem to answer the purpose better. Standards in this position intercept the view, give out great heat, and are too low to afford light, except to such as are very near.

Of the lighting of modern churches I have little to say, as the arrangement is always best effected in the design and construction of the church. I instance two as very effectively lighted—that of St. Martin's-on-the-Hill, Scarborough, and of St. Peter's, Vauxhall-road, London; the latter lighted in the nave by coronæ, suspended between the nave arches.

C. J. F.

KINGSTON-ON-THAMES SURVEYORSHIP.

SIR,—Will you permit me to announce, through your columns, that the office of surveyor of this borough was, on January 24th, filled up by the Council, by the election of Mr. Charles Slagg, C.E., of Manchester. I ask you to do this partially because the advertisement for the office was inserted in your columns, and more especially because most of the applicants for the office are no doubt subscribers to your journal.

In making this announcement it is scarcely necessary that I should notice the statement which appeared in your columns, signed "One of the Gentlemen." Whoever your anonymous correspondent may be, he appears to have been most egregiously hoaxed.

WALTER M. WILKINSON, Town Clerk.

*** As we received letters from two correspondents to the same effect, the "hoax" was not confined to "*one* of the gentlemen."

HIGH-PRESSURE BOILERS FOR BATHS.

IN reply to your correspondent "Beta," I beg to describe a safe substitute for the high-pressure boiler with which he now heats his bath.

Let him fix in his boiler a coil of iron pipe, to which attach the two pipes which supply the bath. Then make a hole in the top of the boiler, and fit in it a lid, like a tea-kettle lid.

Such an apparatus would be perfectly effective and safe, for if the pipes were to freeze up, the coil would not burst, as it would be surrounded by boiling water only; while the boiler having an opening in the top, and covered with a loose lid, might be heated with impunity, although frozen up solid.

It is surprising that builders and ironmongers will continue to fix high-pressure boilers for such purposes, when it is so easy to apply so simple an apparatus, which is not dangerous.

A. M. PERKINS.

"Beta" should use one of the "patent fusible plugs." If fixed rightly he need fear no explosion of his kitchen boiler. The plugs fuse and fall to pieces at a heat somewhat greater than boiling-water, so that should the pipes become stopped by frost or any other cause, the plug melts, and thereby forms an outlet for the steam and hot-water before any portion of the boiler could yield, unless it be a very bad one. The boiler of "Beta's" apparatus is of course of wrought iron, and the pipes should be those known as "lap-welded steam-pipes."

W. H. CULLINGFORD.

In reply to inquiries respecting the bursting of high-pressure kitchen boilers by the freezing of the pipes, I think where the pipes are left exposed, a branch pipe close to the boiler should have a weighted or spring valve, which can be made water-tight at a moderate cost; then there would be no danger from bursting. As a second substitute, I would recommend a draw-off cock fixed in the inlet or outlet pipe; then the servant should be instructed to draw off one gallon of water from this cock (which is the content of a pipe 1 in. diameter, and 30 ft. high). The cock should be fixed just above the range. If either of these plans were adopted, no accident from the bursting of boilers could happen.

J. ELDRIDGE, Hot-water Engineer.

TO TEST BLUE LIAS.

SIR,—I shall be obliged if any of your readers will inform me whether there are any simple means of testing blue lias or other limes, similar to the test employed by the Metropolitan Board of Works to test Portland cement.

L. E.

THE WIDOWS OF CLERKS OF WORKS IN THE CIVIL SERVICE.

SIR,—I trust that in begging your kind insertion of this letter, you will not consider that I am unduly trespassing on your valuable space, by referring to a subject which may not seem of sufficiently general interest to warrant it.

It has recently come to my knowledge, by means of the public press, that a movement is on foot amongst the clerks of works in the Royal Engineer Department, to solicit Government for an increase of pay, and also for pensions for their widows. It has been truly urged that while these gentlemen hold the relative rank of officers in the army, they are at the same time debarred from many of their privileges. Requiring an education, in one branch, at least, of a much higher order than necessary in the army, they receive salaries quite inadequate to the position they are entitled to occupy, and, consequently, are often unable to make suitable provision for their families. Liable at any time to be sent, on short notice, to any station, no matter how remote nor how unhealthy the climate, they are put to considerable inconvenience and expense, in the removal of their families, and in foreign service often fall victims to the climate. As the daughter of one who for many years held the position of clerk of works in the Royal Engineer Department, I can testify to the truth of what I have stated.

My father entered the service about the year 1839, some time after a measure had been passed debarring officers from certain privileges which they had heretofore enjoyed. At that time one of the regulations was, that each person should contribute a certain proportion of his salary—5 per cent.—to a fund, from which, in time of old age or hopeless ill-health, the members were to receive pensions. Subscription to this fund was compulsory: after many years it was abolished. After being upwards of twenty years in the service, eleven of which were spent in a tropical country, and during the whole of which time he discharged his duties with unremitting assiduity, the continual strain on his mental and physical powers brought on an illness, from which he died, leaving a widow and child. Application was made by the widow for a pension, but in vain. A considerable sum of money had been paid into the superannuation fund; but neither he who paid it nor his family ever received anything from it. I ask, is it fair that such should be the state of things? Is it right that the widows of those who have paid money into a Government fund, from which they never received anything, should thus be set aside? Is it right that the widows and orphans of those who perish in their country's service, whether that service be civil or military, should be unprovided for? Is it just, that while the widows of military officers are pensioned off, whether the husband falls on the battle-field or dies at his own home in peace, the widows of civil officers, whose whole service has been one of arduous toil, amidst ever-increasing anxieties, should be uncared for? Would it not be well if some effort, at least, were made to remedy these anomalies? Would it not be well if the widows of such officers would unite in seeking that a clause be inserted, in their favour, in the petition about to be presented, that if it please Government to grant the request of the petitioners, they may not be excluded from participating in any benefits which those who may thereafter become widows shall receive.

A DAUGHTER.

THE "ORANGE-PEEL" PAVEMENT DANGER.

A CORRESPONDENT writes:—Able observations have appeared lately in the *Builder* and elsewhere on the dangerous state of the pavements, but not exactly touching at the moment a "chronic" abuse.

I sincerely trust there is not another capital in Europe where there is such unchecked daily injury to pedestrians from throwing a dangerous substance on the pavements. It is actually amazing to see either the great ignorance or want of principle in those who do this, when the least of better consideration would prompt them to throw it on the "road."

The number of accidents which occur, though not so specified, from this, can, I feel sure, be appreciated by medical men. A respectable paper said, some time back, in half jest, there might be some "conspiracy" of evil-minded persons to so injure the community; but *had* there been any such arrangement, the evil, which appears increasing every year, could hardly have been greater.

THREE THOUSAND POUND CHURCHES.

SIR,—In your issue of the 5th Jan., there is a notice of a new church now being built at Birkenhead, to seat 700 persons for 2,400*l*. As the Ecclesiastical Commissioners are willing to provide the endowment for new district churches, with a population of 4,500, the desirability of giving to the public good and substantial designs of churches to seat 750, within a cost of 3,000*l*. (exclusive of the site and fence walls), will be evident to all your professional subscribers. It generally happens that when an architect is applied to for such a design, he prepares one far too elaborate and costly for the promoters. The result is, the committee is discouraged, and time is wasted. New plans have also to be prepared, or the architect changed. If the architect of the Birkenhead church, and a few others, would enable you from time to time to give the public sketches of the elevation and ground plan of such new churches built by them, at a cost not exceeding 3,000*l*., to seat 750 persons, as you might think good, a great help would be afforded to those who are anxious but afraid to begin the work in other places.

A SUBSCRIBER OF FIFTEEN YEARS.

"RATES, TAXES, AND *IMPOSITIONS*" PAYABLE BY TENANT.

IN the Court of Common Pleas at Westminster, on January 22, before the Lord Chief Justice Bovill, and Justices Willes, Keating, and Montagu Smith, the case of Tidswell *v.* Whitworth was decided. This was an action on the covenant in a lease of a house in a new street in Manchester, whereby the defendant, the tenant, covenanted to pay "all rates, taxes, and impositions whatever, except the property and income-tax, which should become payable in respect of the said demised premises, and to pay the clear yearly rent of 90*l*. for the same." By the Manchester Improvement Act, if any street or part of a street should not be sufficiently paved, levelled, and sewered, the Council can order the owner of the premises to pave, level, flag, or sewer it; and if he refused or neglected to do it, then the Council might do it, and all charges must be paid by the owner, and might be levied upon the occupier to an amount not exceeding the rent due by him. In this case the plaintiff, as owner of the premises, had paid charges for levelling and sewering the street in front of his house, amounting to 225*l*., and in the present action sought to recover that amount from his tenant under the covenant of his lease, as a charge and imposition payable by the tenant beyond his rent under his covenant. A verdict having been obtained for the plaintiff at the trial, with leave to the defendant to move to set it aside and enter it for the defendant, a rule was accordingly obtained.

The Chief Justice said, it was manifest that the Legislature intended that the burden of these payments should be thrown on the landlord. The tenant was not to be called upon to pay more than the amount of his rent then due. He thought the tenant ought not to pay. The other judges concurred.

Mr. Justice Keating said, the word "imposition" was classed with rates and taxes in the covenant, and he thought the intention was, that it should mean charges of the nature of rates and taxes only. He was not at all sorry, in the present case, to be able to arrive at that decision. Rule absolute, to enter verdict for defendant.

THE CHURCH OF ST. MARY-LE-TOWER, IPSWICH.

SINCE 1863, the work of restoration has been going on in this church. The lofty tower and spire are now approaching completion. The tower is 94 ft. high, and the spire 82 ft., making a total of 176 ft. from the base. They are in the Decorated style of architecture of Edward III.'s reign, and built of Bath stone. There is an open parapet, with shields containing emblems of the Twelve Apostles, carved in stone, and below are carved, as hood-mould stops to the belfry windows, the heads of the Twelve Apostles. At four angles are emblems of the Four Evangelists, namely, the Man, the Lion, the Ox, and the Eagle. These figures are 4 ft. 6 in. in length. The parapet is pierced entirely through, so that the base of the spire is seen between the openings. At each angle are carved crocketed finials. Inlaid flint panelling is introduced in bands round the tower, above the door, and under the belfry windows, dividing the structure into stages. The top stage is relieved with chequered flint and stone work.

The spire is crocketed up each angle. The spire lights are filled in with ornamental iron-work, and the upper part is relieved with stone tracery. The whole of the stone-work, both in spire and tower, as it is being cleaned off, is washed down with a strong mixture of soap and water, with the view of hardening and preserving it from the action of the air.

The niche in the old tower has been restored and re-fixed in the new one, above the south door; and in pulling down the old brick porch, the remains of the stone carved figure of the Virgin, that stood originally in this niche, was discovered. This figure, we understand, will be restored and replaced; the work of restoration having been intrusted to a London sculptor.

The entrance below will be groined in stone supported by strong clustered shafts, with carved capitals, and the deeply-moulded outer and inner doors will also have their capitals carved with emblematical figures. The two small single-light windows at the entrance will be filled with stained glass.

The ringers' floor is reached by a circular stone staircase, 5 ft. in diameter, and the belfry windows will be filled with slate louvres. Orders have been given for two more bells so that there may be a peal of twelve, instead of ten as in the old tower; and the funds to defray the cost are nearly subscribed. The cost of changing the peal from ten to twelve will be something like 700*l*.; and the entire value of the peal, when complete, will be about 1,600*l*. The weight of the tenor bell will be 31 cwt. The enlarging and re-hanging of the peal have been undertaken by Messrs. Warner & Sons.

The entrance-doors will be of oak, covered with wrought-iron hinges, and the floor of the tower will be laid with Minton's encaustic tiles.

The designs for the work were provided by Mr. R. M. Phipson, of Ipswich and Norwich, architect, under whose sole direction, this, as well as the entire work of restoration, has been carried out. Mr. J. Stanley, of Norwich, was the contractor for masons' work, and the stone-carvings were done by Mr. Barritt, sculptor, of Norwich. Mr. Miller was the clerk of the works.

A further contract has just been entered into for the completion of the south aisle and the nave. Much also remains to be done in the interior of the church in benching, heating, paving, and carving, and the entire restoration of the chancel, with new vestry, and many other works necessary to render the building complete. The cost of the tower and spire is about 4,000*l*., and the total outlay, we believe, up to the present time, amounts to 11,000*l*. or 12,000*l*.

AGREEMENTS.

PEEL *v.* MATTHEWS.

THE plaintiff in this case (in Vice-Chancellor's Court, before Sir W. P. Wood), had sold in lots some land for building purposes, and had required the purchasers to execute a common deed for the purpose of preventing them from building upon land marked in front of streets which were intended to be laid out. One of the purchasers was allowed in 1860 to build a wall in direct opposition to the covenant in the deed, and in 1862 another purchaser was allowed to do the same thing. The defendant executed the deed in 1863. The plaintiff alleged that defendant had broken the covenant, and the bill asked for an injunction against him.

Mr. Amphlett and Mr. Douglas were for the plaintiff, and Mr. Chitty for the defendant.

The Vice-Chancellor said the plaintiff, by allowing the covenant to be broken in respect of part of the land, had forfeited his right to ask for a performance of the covenant with regard to any other part of the land. The Court could not decree specific performance of part of an agreement. The plaintiff might have a remedy at law for damages, but his bill for an injunction must be dismissed.

PUBLIC INSTRUCTION ABROAD.

THE report presented by the Prefect of the Seine to the Municipal Council of Paris gives the following statistical details as to public instruction in the department of the Seine. The sum allowed in the budget for 1867 for primary instruction amounts to 237,013*l*., including the expenses of the Chaptal College, which amount to 30,746*l*. This will be sufficient for the maintenance not only of the existing schools directly or indirectly at the charge of the town, but any new communal schools or asylums that may be required to be provided for in 1867. The teaching of design, which the municipal authorities are so anxious to promote among the working classes, so as to preserve for Paris its superiority in works of elegance and taste, can be extended to 122 communal schools for boys and girls, and 32 for adults of both sexes. If to this sum of 237,013*l*. we add 6,320*l*. for maintenance, repairs, and furniture of the schools, and 1,034*l*. as an assistance fund for ancient teachers, of both sexes, we shall have 244,367*l*., as the sum to be expended in 1867. Comparing this with the

preceding years we have the following items:—In 1862, the number of schools, asylums, adult class-rooms, work-rooms, and special schools, amounted to 403. Now, there are 522, an increase of 119 in four years.

The *Correspondance Russe* gives very interesting statistical details as to the establishments of public instruction in the town of Moscow in 1865. This town, which contains 365,000 inhabitants, possesses no less than 167 schools, 69 for boys and 58 for girls, and 40 mixed. The number of pupils is 11,366 boys, and 4,950 girls; and there are 1,521 masters or professors, and 70 female teachers. The higher branches of education are given in a single establishment,—the university. Besides this, there is an academy of agriculture, and a recently-founded *conservatoire*. The secondary education is given in five high schools for boys, the number of pupils being 1,719; three military schools, with 1,426 pupils; and six institutes for young women, with 2,263 pupils. Moreover, a hundred private establishments give primary and secondary instruction. There are only 66 primary schools, with 4,786 pupils, a very small number relatively to the population of the inferior classes which is 72 per cent. of the total population. The establishments, kept up by the State, by the town, or by charitable societies, require an annual expenditure of 2,560,000 roubles. In this sum the university figures for 426,000 roubles, and the school of professors for 130,000 roubles.

PRIZES TO ART-WORKMEN BY THE SOCIETY OF ARTS.

THE following is a list of the competitors to whom prizes have been awarded:—

*Works generally executed from prescribed designs.**

CARVING IN STONE.

1. Panel, after chimney piece by *Donatello*, by *J. Daymond, jun.*, 4, Edward-street, Vauxhall Bridge-road, S. Price 8*l.*—(2nd prize of 7*l.* 10s.)

2. Gothic bracket, by *E. J.* Price 5*l.*—(Prize of 4*l.*)

3. Ditto, by *John Edward Daly*, 33, Medway-street, Westminster, S.W. Price 15*l.*—(Prize of 3*l.*)

4. Ditto, by *John Barker*, 4, John-street, Marlborough-road, Chelsea, S.W. Price 12*l.*—(Prize of 6*l.*).

* 5. Flowers carved in Caen stone, by *W. H. Holmes*, 101, Dean-street, Soho, W. Price 5*l.*—(Prize of 5*l.*)

* 8. Carving in marble, by *Owen Thomas*, Harmood-street, Camden Town.—(Prize of 5*l.*)

CARVING AND GILDING.

* 14a. A glass frame, designed and carved by *W. M. Holmes*, principal part of the flowers by *Mouatt* (deceased), gilt in double mat and burnished by Messrs. *Buchholtz, Venning, Chowne, sen., Ettershank, Connor*, and *Allen*; exhibited by *J. H. Wyatt*, 101, Dean-street, W. Price 230*l.*—(Prize of 10*l.*)

REPOUSSÉ WORK IN METAL.

15. Executed in iron, after the Martelli bronze mirror case at South Kensington, by *G. Page*, 39, Duglas-street, Northampton-road, Clerkenwell, E.C. Price 20*l.*—(1st prize of 10*l.*; also, North London Exhibition prize.†)

18. "Raffaelle's Three Graces," in silver, by *Joseph Hakowski*, 59, Frith-street, Soho-square, W. Price 20*l.* Copies at 15*l.*—(Prize of 2*l.*)

20. "Three Graces," in copper, by *Alexander Dufour*, 36, Cleveland-street, Fitzroy-square, W. Price 11*l.*—(Prize of 4*l.*)

* 22. Portrait of the late Viscount Palmerston, by *W. Holliday*, 14, Nailour-street, Islington, N. (Sold.)—(Prize of 4*l.*)

HAMMERED WORK IN BRASS.

26. Adapted for use as a bracket, by *Albert Edward Millward*, 13, New Compton-street, Soho, W.—(Prize of 6*l.*)

HAMMERED WORK IN IRON.

27. Adapted for use as a bracket, by *Alfred Millward*, 35, Little Clarendon-street, Somerstown, N.W.—(Prize of 3*l.*)

28. Ditto, by *G. H.* Price 5*l.* 10s.—(Prize of 2*l.*)

29. Ditto, by *James Gwillim*, 19, Sidney-square, Mile-end, E. Price 15*l.*—(Prize of 2*l.*)

30a. Panel for a screen, by *W. Letheren*, Lansdown Iron Works, Cheltenham. Price 20*l.*—(Prize of 10*l.*)

* 32. Bread-basket, designed by *Mr. A. W. Blomfield*, architect, for East Sheen Church; executed by *T. Winstanley*, 7, Stanhope-street, Clare-market, W.C. Price 12*l.*—(Prize of 2*l.*)

CHASING IN BRONZE.

35. Bust of "Clytie," produced for Art-Union of London, by *H. R. Batchelor, Jun.*, 149, St. John-street-road, E.C. Price 14*l.*—(Prize of 4*l.*)

36. Ditto, by *T. Nichols*, 4, Everilda-street, Hemingford-road, Islington, N. Price 15*l.*—(Prize of 6*l.*)

37. Ornament, after *Goutier*, by *R. Reynolds*, 15, Oak-village, Kentish-town, N.W. Price 15*l.*—(Prize of 2*l.*)

38. Ornament, after *Goutier*, by *G.*—(Prize of 2*l.*)

39. Ornament, after *Goutier*, by *H. J. Hatfield*, 16, Alfred-street, Tottenham-court-road, W.C. Price 15*l.*—(Prize of 4*l.*)

* 40. Group, "Jacob Wrestling with the Angel," by the above.—(Prize of 3*l.*)

* 42. Statuette of "Caractacus," by *H. Hatfield, sen.*, 46, Bolsover-street, N.W. Produced for the Art-Union of London.—(Prize of 5*l.*)

43. Engraving on metal, after arabesques, by *G. S. B.* Price 3*l.* 10s.—(Prize of 2*l.*)

44. Ditto, by *G. Berry*, 31, Brewer-street, Golden-square, W. Price 4*l.* 4s.—(Prize of 5*l.*)

* 49. Ditto, on silver cup, by *Gilles McKenzie*, Tudor-street, Sheffield.—(Prize of 2*l.*)

ENAMEL PAINTING ON COPPER.

* 51. "Boy and Doves," after *Raffaelle*, by *Walter J. W. Nunn*, 10, Gardour-street, Bromehead-street, Commercial-road, E. Price 5*l.*—(Prize of 3*l.*)

PAINTING ON PORCELAIN.

53. "Two Children," painted on a vase, by *W. J. W. Nunn*, Messrs. Battam & Son, Gough-square, E.C.—(Prize of 2*l.*)

57. "Two Children," by *William H. Slater*, Oak-hill Cottages, Stoke-upon-Trent. Price 5*l.* 10s.—(Prize of 2*l.*)

59. Ornament, by *Alexander Fisher*, 5, Clyde-street, Stoke-upon-Trent.—(Prize of 3*l.*)

60. Ornament, plateau in blue, after design by *Maestro Ludovico*, by the above.—(Prize of 3*l.*)

61. Pair of door finger-plates, majolica style, by *Miss L. Leila Hawkins*. Price 5*l.* 5s.—(Prize of 2*l.*)

* 62 & 63. Circular-plates, subjects from the "Signatura" ceiling, by *W. P. Rhodes*, School of Arts, Stoke-upon-Trent.—(Prize of 2*l.*)

DECORATIVE PAINTING.

64. Ornament, by *John Slater*, Field-place, Stoke-upon-Trent. Price 3*l.* 3s.—(Prize of 4*l.*)

66. Ornament, by *Charles Pfänder*, 28, Bayham-street, Camden-town, N.W. Price 6*l.* 5s.—(Prize of 2*l.*)

67. Ornament, after a picture-frame in the South Kensington Museum, by the above. Price 13*l.* 10s.—(Prize of 4*l.*)

DIE SINKING.

71. By *Albert Heness*, 3, Egbert-street, St. George's-road, N.W. Price 10*l.* 10s.—(Prize of 2*l.*)

GLASS BLOWING.

72. Exhibited by Dr. Salviati, 431, Oxford-street, W. Produced by *Marco Seguso*, of Murano.—(Highly commended, but ineligible for a prize, not having been produced in this country.)

BOOKBINDING.

73. After an Italian specimen, "Quintus Curtius," by *John Jeffrey*, 23, Upper Marylebone-street, W. Price 7*l.*—(Highly commended, but ineligible for a prize this year, the producer having taken the 1st prize last year.)

74. Early Florentine style, "Histoire de la Porcelaine," by *Louis Genth*, 30, Brydges-street, Covent-garden, W.C. Price 35*l.*—(Prize of 5*l.*)

76. Case specimen of Mosaic, by *Louis Genth*, 30, Brydges-street, Covent-garden, W.C. Price 10*l.* 10s.—(Prize of 3*l.*)

ILLUMINATIONS.

77. Specimen by *Charles Pfänder*, 28, Bayham-street, Camden-town, N.W. Price 5*l.* 10s.—(Prize of 4*l.*)

Works executed without prescribed designs.

WOOD CARVING.

(a.) Human figure in the round, in alto, or in bas relief. Animals or natural foliage may be used as accessories.

81. "Autumn," female head in satin wood, by *G. F. Bridge*, 3, Vincent-square, S.W. Price 5*l.* 10s.—(Prize of 5*l.*)

83a. Panel, in Ebony, "Boy and Moth," by *R. Flipping*, 67, Charrington-street, Oakley-square, N.W.—(Prize of 2*l.*)

(b.) Animal or still-life. Fruit, flowers, or natural foliage may be used as accessories.

85. Panel. "Bird and Flowers," by *E. Dujardin*, 46, Camberwell-grove, S. Price 10*l.*—(Prize of 2*l.*)

(c.) Natural foliage, fruit, or flowers, or conventional ornament, in which grotesque figures or animals may form accessories, preference being given where the work is of an applied character for ordinary decorative purposes, as representing commercial value.

86. Panel in Lime Wood, by *J. S. Booth*, 19, Malden-road, Kentish-town, N.W. Price 10*l.* 10s.—(Prize of 4*l.*)

88a. Panel of Flowers, exhibited by Messrs. Gillows & Co., carved by *R. A. Brangan*, 54, Foley-street, W.—(Prize of 3*l.*)

Works Executed and Finished by Machine.

Exhibited by *Charles J. Hill*, 6, Albany-street, Regent's-park, N.W.:—

96-98. Three Groups in Ivory. Price 15*l.*

99. "Head of H.M. the Queen," in Ivory. Price 5*l.*

100. "Greek Head," in Steel. Price 8*l.*

101. Ditto, in Malachite. Price 5*l.*

102. Case with Two Proofs from Engravings on Steel for Surface Printing, and two "Medusa's Heads." Engravings and dies in hand. Price 4*l.* each.

(The above are highly commended, but ineligible for these prizes.)

A meeting of the competitors was held at the Society of Arts on Wednesday evening last, but we must defer report of the proceedings.

* Those marked with an asterisk (*) are not after the prescribed designs.

† This prize consists of the interest of 167*l.* 7s. 3d. Consols, invested in the name of the Society of Arts, to be awarded by the Council "for the best specimen of skilled workmanship" at the Society's Exhibition.

CHURCH-BUILDING NEWS.

Gelligaer.—The nave of the parish church of Gelligaer, Glamorganshire, after being closed for sixteen weeks for the purpose of restoration, has been re-opened by the Bishop of Llandaff. The work has been undertaken as an instalment only, the chancel still remaining to be done, the total cost being 1,200*l.* The church, which is an ancient one, is supposed to have been built by Maenarch, Earl of Hereford, in memory of Mabon, an old Welsh saint, whose niche, still partly coloured, has been found on the side of the chancel-arch. There is an entirely new roof of Memel timber. The walls have been strengthened by means of buttresses. The floor has been lowered to its original level, that is about 15 in. During the excavations, which were necessary for this purpose and inserting the heating apparatus, the bones of fully 200 people were found. Around the wrists of some wreaths of box still perfect were discovered. The chancel-arch, which is a peculiarly narrow one, has been entirely rebuilt. On either side it is supposed an altar once stood, as in the old north wall the old piscina, still perfect, has been found, and in the south wall, immediately opposite, the opening for the other, exactly corresponding in dimensions, &c., has been discovered. The cavity for the stoop on the south side by the porch has also been discovered, but the stoop itself has disappeared, along with the second piscina. The doorway to the rood-loft has also been found on the north side of the chancel-arch. All these old relics have been preserved and exposed to view. In this church, and also in the Church of St. Tyfaelvy, Pontlottyn, within the parish, erected in 1863, there are baptisteries, which are used by the people. The architect of the restoration was Mr. Charles Buckeridge, of Oxford. The east window is of stained glass, by Clayton & Bell. During the past four years a new church, three chapel schools, and one school-room have been erected in this parish, and, including this present work, at an outlay of 5,050*l.*, of which 550*l.* still remain to be collected.

Hasleton.—The parish church of Hasleton, on the Cotswold Hills, has been re-opened, after a general restoration and the addition of an aisle. Prior to the restoration the edifice was in a very mean state, and its accommodation was alto-

gether insufficient. A north aisle has been added; a new roof has been put to the whole—panelled in the chancel, and open in the other parts; and open seats have taken the place of the old high pews. There is a new pulpit of Painswick stone, and the floor is laid throughout with Messrs. Godwin's tiles. Messrs. Medland, Maberly, & Medland were the architects, and the work was carried out by Messrs. Earle & Sons, of Northleach, carpenters, and Mr. Barnfield, mason, of Shipton, the adjoining parish. The east window, which is of Norman character, is filled with stained glass representing the Crucifixion; and a small window near the font has been filled with painted glass representing Our Lord's Baptism. This window was the gift of the architects. The glass was prepared by Messrs. Heaton, Butler, & Bayne. There are several specimens of ironwork in the church—among them the altar-rails, door furniture, and font lid, which are by Messrs. Chew, of Stroud.

Briton Ferry (*South Wales*).—The Church of St. Clement has been consecrated. The new edifice has been erected upon a convenient site presented by the Dowager Countess of Jersey, who, in addition, contributed the donation of 1,200*l.*, supplemented by a contribution of 100*l.* from her ladyship's grandson, the present Earl of Jersey. The church has been erected from a design by Mr. John Pritchard, the diocesan architect; the builder being Mr. R. Roderick, of Margam. The edifice consists of a nave, with north and south aisles, south porch, and north and south transepts. The chancel is apsidal, and has on its north side a sacristy and chapels for organ and choristers on either side. The nave is 62 ft. 9 in. long by 38 ft. wide, including the aisles, which are 9 ft. wide. The transepts are 17 ft. 3 in. by 13 ft. The chancel is 36 ft. 6 in. long, by 18 ft. wide. The whole affords accommodation for 468 persons. The style is First Pointed, slightly partaking of the Early French feeling, and extremely plain and simple. There is a double bell-gable over the chancel arch. The whole of the seats are entirely free and unappropriated.

Newcastle-upon-Tyne.—St. Andrew's Church has been re-opened for public worship, after having been closed for several months, during which period it has undergone an extensive restoration. Mr. T. Oliver, architect, Newcastle, was employed for the work; and Messrs. John Burnup & Sons were engaged as the contractors. The floor of the church has been lowered to its original level, and, with the exception of the modern sittings in the south transept and in the chancel, the church has been reseated throughout with open benches. There is now a free circulation of air underneath the flooring; and a solid layer of concrete has been laid upon the immediate surface within the entire area of the walls of the church. The benches are similar in design to those in the south transept, but more commodious, and having sloping backs. A considerable number of these have been retained as free sittings. By the removal of the organ gallery, the tower archway is exposed to view, and seats are placed in the tower. The pulpit is of Caen stone, with grey polished granite enrichments. It is after a design by Mr. Pugin, and the sculptors were Messrs. Potts & Moat, of this town. The ancient windows have been almost altogether restored, the original size and detail being adhered to, and their mode of construction reproduced. The last window is entirely new, and consists of three large bays separated by stone mullions and three compartments caused by their intersections under the arch, the new window having been built upon the same lines as that which it has replaced. The entire window has been filled with stained glass, the subject selected being "The Ascension." In the upper part of the central light is the figure of Our Lord, surrounded with bands of conventional cloud and rays of light; the lower portion of the same compartment being occupied by a kneeling figure of St. Andrew,—the patron saint of the church. The lateral bays contain each a group of the apostles and scriptural women, numbering thirteen figures in all. The subject is elevated upon a base of foliage and surrounded by similar canopied work in the tops of the arches. The tracery openings have, at the apex, the *Agnus Dei* as the emblem of our Lord's victory over death, and two angels bearing the legend in scroll-work,—"In my Father's house are many mansions. I go to prepare a place for you." The side chancel window, also consisting of three lights, but without tracery, has likewise been filled with figure-glass. The entire light represents "The Resurrection;" the figure of Our Lord, surrounded by a halo of light, rising from the sepulchre, occupying the upper portion, and the affrighted Roman soldiers the space below. On the right are depicted the two figures of Peter and John coming to the sepulchre, and on the left two of the holy women coming with ointment and spices to embalm the body. The windows have been executed by Mr. Wailes, of this town. The nave arches and piers, the tower arch and piers, and the Norman arch leading into the chancel, have had the paint and whitewash removed from their surfaces, and the stonework exposed to view. The works have been carried out by Messrs. John Burnup & Sons, for the masons', joiners', and general work; by Messrs. Mills & Sons, for the gasfitting work; and by Messrs. W. H. Walker & Son, for the heating.

DISSENTING CHURCH-BUILDING NEWS.

Liverpool.—The foundation-stone of a Welsh Independent Chapel has been laid at the corner of Park-road and Northumberland-street, Toxteth Park. From the designs of the architect it would appear that the style of the chapel will be an adaptation of the Early Pointed period of architecture, with plate tracery, crisped and lancet windows, and circular windows in the gables. The front staircases will form features at each side of the principal gable, and the back staircase will terminate by a square tower with pointed roof. The main roof will be surmounted by a spirelet rising to the height of nearly 100 ft. above the street level, and, whilst acting as a ventilator, will give effect to the building, and be one of the prominent features of the neighbourhood. The walls will be built of Yorkshire parpoints or shoddies, with all the angles, door and window jambs, arches, and other dressings, of Stourton stone. The building will be arranged as follows:—Chapel, 41 ft. wide, and extreme length 70 ft., with room for 700 people. School-room, behind same, with two vestries, water-closet, &c., on ground-floor, and large school-rooms above, together with boiler-room and gas boiler apparatus complete. The interior of the chapel will be divided into nave and aisles by light iron columns, from which will spring the main timbers of the roof, all of which will be deeply cut and moulded,—those over the nave circular, and circular or arched timbers will also run from column to column, dividing the nave and aisles. The pulpit or rostrum is to be at the west end, and will have in front of it a large raised daïs or deacons' pew, with stalls on each side and a table in the centre, a screen forming a front to the choir; and a circular window in the recess behind and above, will complete the effect of this end of the chapel. Mr. C. O. Ellison is the architect, and Messrs. Nicholson & Ayre are the contractors. The cost of the building, including the site and other expenses, will be about 5,500*l.*, of which 1,100*l.* have already been subscribed. It is expected that 1,800*l.* will be realised by the sale of the old chapel.

STAINED GLASS.

Wolverhampton Collegiate Church.—A memorial stained-glass window has been placed in the chancel of this church by the family of the late Mr. Joseph Underhill, of this town. The window is situated on the south side, and is in memory of Mr. and Mrs. Underhill. The arrangements of design and spaces are effected so as to agree generally in levels, &c., with the "Campbell" window: at the same time all the details are varied, and differ from what was previously done. The main figures of the "Underhill" window are,—Abraham, Sarah, (in the centre), and Barzillai. These figures are surmounted by canopies of foliage, the feature of which is the poppy flower and leaf. Below are three groups, viz.—first, Abraham buried by his sons, Isaac and Ishmael; second, Jacob setting the pillar upon Rachael's grave; third, Jacob blessing his children before his death. The tracery of the window is treated symbolically, as there was not room for figures. A meaning and subject are given to this portion by emblems having reference to the Resurrection, the scenes below portraying death: thus, in the upper portion of the centre main light is shown the Greek monogram Alpha, Omega; and in the centre of the tracery an idea of the New Jerusalem, the Lamb on the Altar, and the Four Beasts worshipping. The artists were Messrs. O'Connor, of London, who carried out the "Parke" and "Campbell" memorial windows, and are now engaged upon the "Nesbitt" stained glass for the same church.

Pilton Church, near Oundle.—A stained-glass memorial east window has just been fixed in the chancel of this church. It is in remembrance of Mr. F. R. Hodgson, of Withington, in the county of Lancaster, father of the Rev. R. Hodgson, the present rector of Pilton, and is the work of Messrs. John Hardman & Son, of Birmingham. It comprises a story of twelve subjects: eight are from Old Testament history, commencing with the creation of Adam, and four from that of the New Testament, which are the Nativity, the healing of the daughter of Jairus, the Crucifixion, and the Ascension of our Lord.

Books Received.

The Science of Moderation; or, the Quantitative Theory of the Good and the Beautiful: Formative Ethics. By W. CAVE THOMAS. London: Smith, Elder, & Co. 1867.

MR. THOMAS has now collected his essays on "The Golden Mean," with most of which our readers are already acquainted, into a volume, under the title here given; and whatever objections may suggest themselves to the perusers of this volume, its thoughtful pages cannot but be read with interest by every reflective mind. Though Mr. Thomas's theory has been developed by degrees in the *Builder* itself, we confess we do not always follow him with conviction of its truthfulness; and we have already expressed some of our ideas on the subject in a review of a previous volume of Mr. Thomas's, entitled, "The Conformation of the Material by the Spiritual; to Imperfection by the Spirit of Error; to Perfection and Beauty by the Spirit of Truth: Christian Idealism."* Since our strictures were written, Mr. Thomas inclines rather to speak of "scientific idealism" than "Christian idealism," and he now insists rather upon the power and influence of the "moral" mean to develop physical beauty and perfection in man, than on the power and influence of "the awakening of a holy spirit in the soul of man" to do so. In this we think Mr. Thomas is quite right; inasmuch as he evidently did not mean *the* Holy Spirit or Holy Ghost (who is the "Lord for the body," which body is the temple of that lord and master), when he spoke of the awakening of a "holy spirit"—"a spirit of rectitude" or "righteousness"—in man, as the means of bringing the human body to the perfection of physical beauty: it was simply to the cultivation or exercise of moral principle, not to the infusion of the Holy Ghost, the comforter and refresher, he alluded. And there it was we differed from Mr. Thomas. But into that branch of the subject we need not again enter.

There is another phase of the author's theory, however, of which we may here take some slight note. In speaking of vitality in positive and negative aspects, he regards the two extremes which flank what he considers to be the grand mean, or moral force, the one as being "positive or uncontrolled energy," and the other "negative or inert." But the negative is not necessarily inert, unless it be proved that there is but one species of energy; and we will venture to predict that this will not be proved of life principles; and one species of energy may be the negative of another, and yet be in itself anything but inert. In this view the awakening of the Holy Spirit in the soul of man is the infusion of another species of energy altogether from that of the soul of man himself; and although each be negative to the other, each is equally an energy, and neither is *inert*. If neither suffice to overpower its fellow, *that* is much liker inertia in the core of Mr. Thomas's very "mean" itself than anything else. So is it with physical forces: the negative electricity is no more *inert* than the positive. But the mean,—the neutralization of the one by the other,—is inert! So is it even with mechanical force and motion: take a pendulum, for example. The swing to one side is negatived by the swing to the other; but neither of these two extremes is inert: it is the grand mean between the two which is inert! The mean, in short, in this view is liker dual death than life either single or dual. We can conceive a mean, however, of another description altogether, in the diurnal *alternation* (as in

* See "On Christian Idealism," in *Builder* of August 16th, 1862.

waking and sleep) of two opposites or extremes that would, indeed, be "a golden mean" consistent with life and energy, both human and divine, although enjoyable only by a daily death.

How is it,—if mere "moral" perfection or *self*-righteousness,—and not the transcendental and transmutative "righteousness of God," who "*is* our (transcendental) righteousness," or rectifier of a lost balance transcending selfhood,—be the sufficient and effective cause of physical beauty and perfection,—and not be in itself the mere "*fruits* of the Spirit,"—that the grand exemplar of this very moral perfection is said to have had "no beauty in him that we should desire him,"—"no form nor comeliness,"—"his face marred more than any man, and his form than the sons of men?" Is this then what the highest moral perfection will bring us to? Ah! Mr. Thomas, there is a mystery here the depths of which your mere "moral" plummet of "righteousness" cannot fathom.

This mystery, nevertheless, the principles inculcated in our strictures on Mr. Thomas's Christian Idealism are capable of fathoming in perfect consistency with the idea that physical *and moral* perfection are *simultaneously* attainable, both of them merely as fruits, or effects, by "the awakening of *the* Holy Spirit in the Soul of man"—that Holy Spirit's Servant; and in the Body of man—that Holy Spirit's Temple.

Recent Excavations in Rome. By ALEXANDER THOMSON, of Banchory. Issued by the Architectural Institute of Scotland. 1866.

Mr. THOMSON's papers on excavations in Rome, to which we have before now referred, having interested the members of the Scottish Institute, the Council suspended the usual issue of lithographs, and have given to each member a copy of the last paper read by Mr. Thomson. It is illustrated with thirteen lithographs, several of them showing restorations on the Via Appia, as proposed by Canina, and makes a very interesting little volume. Mr. Thomson gives a view and account of the odd tomb of Eurysaces, the baker, at the Porta Maggiore. The second story of the monument is formed of the mortars which he used for kneeding his dough. Placed on their sides, they look very like siege mortars. On the frieze above were represented the various works of a baker,—grinding the corn, making the dough, baking, and so forth. On the south front, a sarcophagus, in the form of a bread-basket, held the ashes of the baker's wife!

VARIORUM.

"Glimpses at the Origin, Mission, and Destiny of Man; with Miscellaneous Papers. By Mr. Lawrence Heyworth. Williams & Norgate, Covent Garden." The miscellaneous papers alluded to in the title of this volume compose the greater portion of it, and relate to taxation, peace, war, the Sabbath, intoxicants, &c.; and are intended to show that "unwise fiscal legislation is the great impediment of our day to universal commerce, to social amelioration, and to intellectual advancement: customs duties are human barriers, nefariously erected everywhere, across the Heaven-designed channels of humanizing commerce."——"Analogy of the Laws of Musical Temperament to the Natural Dissonance of Creation. By M. Vernon. London: Whittingham, Frith-street, Soho." We candidly confess that we have not devoted sufficient time to a perusal of this little volume to enable us to pass an opinion on its merits, but it seems to be full of thought, and will doubtless prove interesting to those who happen at one and the same time to be amateurs in melodic and harmonic acoustics, geology, astronomy, and the music of the spheres.——"A Shilling Arithmetic, for Elementary Schools. By J. W. Colenso, D.D., Bishop of Natal" (Longmans, publishers), needs no recommendation from us: all we need do is to announce this cheap re-issue of a standard work.

Miscellanea.

THE LATE MR. PARKIN JEFFCOCK.—We go a little out of our usual course to mention that the Rev. J. T. Jeffcock, of St. Saviour's, Hoxton, is preparing a Memoir of his late brother, Mr. Parkin Jeficock, civil and mining engineer, of Derby, who lost his life with an exploring party at the Oaks Colliery after the terrible accident there last December.

A NEW CHURCH FOR POPLAR.—Mr. Henry Green, the shipbuilder, has given 6,000*l.* towards the building and endowment fund of a new church at Poplar, to be dedicated to St. Stephen. The ladies of the new district have presented a stained-glass window for the chancel, at an expense of 200 guineas. The seats in the church are all free.

GLASGOW ARCHITECTURAL (ASSISTANTS') ASSOCIATION.—The usual fortnightly meeting of this Association was held on Monday evening, the 28th ult., at the Architectural Society's Rooms, 138, Bath-street. Mr. Myles, the president, in the chair. Mr. James M. Monro read a paper entitled "Symbolism in Churches." A lively discussion followed, as to the propriety of introducing symbolism in designing churches of the present day. At the close, a vote of thanks was accorded to Mr. Monro for his paper.

THE SUBURBAN VILLAGES AND GENERAL DWELLINGS COMPANY (LIMITED). — The first general meeting of shareholders has been held at the offices of the company, No. 1, Westminster-chambers. The company have held back in their operations, not having been able to procure a desirable estate to commence upon, and in consequence of the extreme deadness in the money market. They had been offered an estate situated near to four railway stations, and desirable in all other respects, from the Ecclesiastical Commissioners, upon very advantageous terms, and had accepted the offer. The sanguine expectation of the directors was, that so soon as the public saw efforts being made to carry out the objects contemplated by the company, they would have a large increase in the number of their shareholders.

THE LEAMINGTON SEWAGE CASE.—The case of Heath *v.* Wallington has been before the Vice-Chancellor's Court upon several occasions during the last two years, and the operation of the injunction has been from time to time postponed in order to give time for filtering or deodorising the sewage before pouring it into the river, where it was decided to be a nuisance to the complainant. The Vice-Chancellor (Sir W. P. Wood) has now granted a sequestration against the Leamington Local Board of Health, in the terms of that awarded against the Banbury Local Board in January, 1866, observing, that if the defendants were unable to discharge the sewage of Leamington into the river without creating a nuisance, they could not be allowed to pour it in at all, as they had no more right to discharge it into the river to the injury of the plaintiff and his property than into his drawing-room.

THE BARKING SEWAGE EXPERIMENTS. — Mr. Hope, as manager of the Metropolis Sewage Company, has addressed a letter to the *Morning Herald*, a writer in which paper had stated, in referring to the experiments on the sea-sand at Barking, that the depth of sand was only 1 ft. Mr. Hope says,—

"In reality the sand is 2 ft. deep, and was purposely laid 2 ft. deep in order to prevent the possibility of any one attributing the growth of the grass to the influence of the soil beneath. Of the 10 acres of land at Barking reservoir irrigated with sewage only one is covered with sand, the other nine remaining in their natural condition. I am, therefore, able to answer your question of 'how much less sewage would have produced the same result on rough, uncultivated ground?' And I am happy to inform you that the result on the sand was decidedly superior to that on the 9 acres. As you allude to my old controversy with Baron Liebig, and suggest that perhaps the baron would point out that there was a difference between sand *in situ* and sand 'transferred,' I must ask you to refer back to Baron Liebig's letters to the Lord Mayor that we heard so much of about two years ago. He there complained that I had never made an experiment even with a flower-pot filled with sand and watered with sewage, showing that he himself did not regard it as important whether the sand was *in situ*, or whether it was 'transferred.' Moreover, he entered into a long dissertation to show what he meant by the word 'sand,' and further committed himself to the following very distinct and definite statements:—First, that it 'would be necessary to form a superficies, 1 in. in thickness,' of clay above the sand before anything could grow upon it; secondly, that 'we know with almost mathematical certainty that there must be something besides to make a plant grow in sand manured with sewage, and that an acre of sand, even with the largest dressing on it, would not produce a hundredweight of hay;' thirdly, that 'no land plant can grow of itself in a medium of sand to which the nourishing elements are applied in a state of solution.' Nothing can be more clear and distinct than these three statements; nevertheless, off an acre of sand at Barking we have in some plots at a single cutting obtained a weight of grass at the rate of upwards of 20 tons to the acre, and we have brought various other land plants to maturity under the same circumstances—mangel wurzel, celery, radishes, carrots, &c., and a rape seed which was accidentally dropped into the sand grew into a perfect bush. I am happy also to be able to inform you that nothing can be more satisfactory than the progress of the company's larger experiments at the Lodge Farm, a short distance beyond Barking."

DANGEROUS STATE OF A RAILWAY BRIDGE.—The bridge at Dukinfield spanning the river Tame, about 100 yards below the station, was discovered by an engine-driver, while passing with his train, to be in an unsafe condition. He told the station master, who found that it had given way, and at once gave instructions to stop all traffic.

REMOVAL OF FIRE-DAMP FROM MINES. — A Mr. Williams, from Blairfin, Wales, has been illustrating, at Barnsley gas works, a scheme, by which, he states, coal mines may be cleared of fire-damp. The desired result is proposed to be obtained by the use of a very simple apparatus, consisting of an inverted syphon, to which is connected a pipe from the mouth of the shaft. The short end of the syphon is inserted in the place containing inflammable gas, and the pipe from the top is attached to the other end. The air first being extracted from the pipe, the gas, which is lighter than the atmosphere, will rise to the top. The experiments were, it is said, successful, and were witnessed by several mining engineers.

WASHED THROUGH A SEWER. — A singular occurrence, which well-nigh proved fatal to two men, has taken place at Birkenhead. A mason and a labourer were working on a raft in a large sewer, connected with the great docks of Birkenhead. Suddenly the water from one of the graving-docks was let into the sewer, and the raft was swept away by the current. The mason managed to get off the raft and stay himself near the Duke-street Bridge, where he was got out, after an interval of some five hours, in a very exhausted state. The labourer was, however, swept away on the raft through two miles and a half of sewer, and at length reached the Morpeth Dock Basin, where the raft was fortunately stopped by a half-open flood-gate; otherwise it would have floated into the river. He was rescued by means of a rope.

OPENING OF THE NEW AGRICULTURAL HALL AT BRIDGNORTH.—A public dinner in the new Agricultural Hall, Bridgnorth, inaugurated the opening of the building. The Hall is situated in High-street, and adjoins the Crown Hotel, and has been erected by Messrs. Nevett, Brothers, of Ironbridge, from plans prepared by Mr. R. Griffiths. The hall is entered from the street by a lobby and vestibule. On each side of the lobby are shops and ticket-taker's office, with a large market-room over to front the street. At the south end of the hall is a settling room, a convenience long needed by the farmers. Over the settling-room, approached by a private entrance, is a billiard-room. The underground vaults are three in front and two beneath the hall. The buildings are Gothic in style. The front next the street is built with red bricks and white stone dressings. The exterior side walls are built with white and blue bricks. The roofs are covered with Bangor slates. The interior of the hall is lined with white bricks, relieved with red brick piers and arches. The hall is heated by hot water, with a double row of pipes running on all sides, covered with iron trellis-work at floor level. The room is chiefly lighted by a lantern light, running the full length of the building.

THE LEEDS AND YORKSHIRE LAND, BUILDING, AND INVESTMENT COMPANY (LIMITED). — The first general meeting of the shareholders of this company has been held. The report stated that the directors had resolved to recommend that out of available profits, amounting to 1,513*l.* 19s. 9d., they should pay a dividend at the rate of 10 per cent. per annum, which would absorb 334*l.* 5s. 8d.; to carry to the reserve fund 750*l.*; and to carry the balance 429*l.* 14s. 1d., to next year's profits. Out of 25,000 shares of 10*l.* each, which constituted the capital of the company, it is proposed that only 10,000 shall be issued at par, and of these about 8,000 are already taken up. Two estates had been purchased, one in Meadow-lane, and another at New Wortley. The former had been sold at a fair profit, and the latter, which consisted of buildings and thirteen acres of land, was rapidly being taken up, the whole of the buildings had been sold, and land in addition for the erection of about eighty houses, a number of which were already built and tenanted, and others were in course of erection. Advances had been made on mortgage securities to the extent of 9,648*l.* 17s., of which 1,489*l.* 13s. 10d. had been repaid, and the balance was repayable at short dates or by monthly instalments. The report and balance sheet were unanimously adopted.

MOSCOW GASWORKS.—We are asked to state that the company's works were designed and executed by Mr. J. M. van der Made, C.E.

THE "GOLDEN SERIES" OF PHOTOGRAPHS.—Under this title Mr. Holyoake is publishing from the Alexandra Studio in Great Coram-street, an interesting series of portraits on a gold mount, which gives a novel and agreeable effect. The specimens we have seen, chiefly of actors, actresses, and dramatic writers, are faithful as likenesses and excellent as photographs. The studio has additional claim as being formed to afford employment to women.

MISS GLYN'S READINGS.—These readings, as we expected and they deserved, have increased in attractiveness as they proceeded. "Hamlet," given on the 25th of January, was attended by a very large audience, who went away delighted. Miss Glyn shows a power and versatility which only a few of her hearers were aware she possessed. Every character has its proper weight, and the effect left on the mind of the auditor is that of completeness. On this, Friday, evening, the 31st of January, the reading of "Antony and Cleopatra," will be repeated, and will conclude the present course.

METROPOLITAN BOARD OF WORKS. — At the last ordinary weekly meeting of this Board, the Works and General Purposes Committee recommended that the request of Messrs. Doulton and Stiff that the Board would approve the formation of dock entrances under the roadway of the Thames Embankment (south), opposite their premises, in lieu of the subways agreed to be constructed by the Board, be not complied with; and that the engineer be instructed to carry out the work in accordance with the terms of the original agreement, which was agreed to: they also recommended that a double 10-foot way be formed under the roadway of the Thames Embankment (south), at White Hart Dock, with a headway increased to 8 ft., as proposed by the vestry at Lambeth, in lieu of the Ferry-street entrance, as authorized by the Act, which was adopted. They also submitted a plan of an approach to the steamboat pier at Lambeth, and recommended that the same be approved, and that the Vestry of Lambeth be informed accordingly, which was agreed to.

CO-OPERATION IN COAL: THE JOINT-STOCK COAL COMPANY (LIMITED). — This company, at its formation, in 1864, commenced with a small capital, upon the expectation of paying a good dividend to its shareholders as investors, and also especial advantages to its shareholding purchasers by way of a bonus upon their coal consumed. As the result of its first year's operations the company paid a dividend of 10 per cent., and returned to its consuming shareholders 2s. 6d. upon each ton of coal they had purchased. The advantages thus obtained will be best seen by the following illustration:—A B has ten shares in the company, upon which he has paid 5*l.*, and on the shares he would receive 10s. dividend, but, supposing he has also consumed 12 tons of coal during the year, upon these he would receive a bonus of 30s., so that in reality he obtains 40s. dividend upon his 5*l.* investment. The close of the second year's working shows results equally satisfactory. The first capital of 50,000 shares was quickly subscribed, and the second 50,000 shares are being rapidly allotted.

MAIDSTONE COTTAGE IMPROVEMENT SOCIETY.—From the directors' annual report, it appears that the company now possess forty-seven cottages; and that the subscribed capital amounts to 3,715*l.*, shares to the amount of 720*l.* having been subscribed for during the past year. The rents, after deducting rates and taxes and 5 per cent. for collection, amounted during the year to 236*l.* 10s. 10d., out of which 5 per cent. dividend, clear of income-tax, has been paid. This leaves a balance of 38*l.* 13s. 8d. to be added to the reserve fund, which would thus reach the sum of 126*l.* 3s. 6d. The amount spent for repairs, in cementing damp walls, &c., was 32*l.* 4s. Four years' working, adds the report, has shown that the company offered a sure investment, and had improved some of the worst parts of the town; but very many cottages still urgently needed improvements such as would never be made by the generality of private owners. All the subscribed capital of the company had been invested, and the directors therefore asked the shareholders and the public at large to take more shares, so as to enable the company to extend its operations.

ASSISTANT SURVEYORSHIP, MAIDSTONE. — The local Board of Health have appointed Mr. James Harrison to be their assistant surveyor, at a salary of 70*l.* a year.

THE NORWICH DRAINAGE. — We are glad to observe that after considering a report by their surveyor, Mr. Alfred W. Morant, to their Sanitary Committee as to the dry-earth closet system which it was proposed to adopt instead of a system of drainage, the Norwich Board of Health have resolved, with one dissentient, "that the system of earth closets is not applicable to this corporate district."

THE CANTERBURY DRAINAGE AND WATER SUPPLY.—Mr. Pilbrow's conclusions with reference to the proposed new drainage and water supply for Canterbury have been published. He estimates the cost of drainage at 18,000*l.* It is not intended, it is said, to erect new waterworks, but to induce the existing company to so perfect their property that it may be made available for the future supply of the city.

SALE OF A RAILWAY COMPANY'S PLANT. — A "great sale of rolling stock" has taken place at the George Hotel, Shrewsbury. The stock was the property of the Bishop's Castle Railway Company, whose line, running from Craven Arms to Bishop's Castle, with a projected continuation to Montgomery, was lately seized by the sheriff, and the company being unable to satisfy the claims of the suing creditors, their available property was ordered to be sold by auction. The total sum realised was 3,522*l.* A gentleman from Birmingham, stated to be the representative of the Midland Wagon Company, was the principal purchaser.

THE PROPOSED MACCLESFIELD NEW INFIRMARY. The sub-committee appointed to visit various infirmaries, and report to the general committee as to the plan it might be advisable to adopt for the proposed Macclesfield Infirmary have visited those of Leeds, Birkenhead, Chorlton, and Ashton, and reported in favour of the pavilion plan of the architect, Mr. Stevens, with minor alterations suggested by medical men. The general committee have approved the plans as presented, and resolved to lay them before a general meeting of the subscribers. The probable cost of the building is estimated at 12,000*l.* It is proposed to lease or purchase additional ground from the Free Grammar School authorities, on whose ground the proposed site stands, or rather from the Charity Commissioners.

ANOTHER KITCHEN BOILER EXPLOSION IN THE NORTH.—One of these accidents, attended with fatal results, has occurred near Brechin. Towards evening, a female servant had lighted a fire in the kitchen range. The boiler had been empty, and owing to the late frosts the water in the feeding-pipe was frozen, so that no water got into the boiler until that was red hot, and then when it did reach there an explosion took place. The whole of the range was torn out, the roof of the kitchen was blown off, and the doors and windows of the wing were destroyed. The poor woman was severely injured, and thrown back on the floor. Then her clothes caught fire, but she managed to get to the snow at the door and roll amongst it, so as to extinguish the flames. She died, however, next day.

THE PROPOSED ASSIZE COURTS FOR SHEFFIELD. The Improvement Committee of the town council have unanimously resolved to recommend the council to proceed with the Bill which is now in the hands of the Parliamentary agents, the words "town council of the borough of Sheffield" being substituted for "Justices of the West Riding of the county of York." This alteration is proposed to be made in consequence of the threatened opposition of the West Riding to the Bill. If passed, as contemplated, the "Sheffield Assize Courts Act, 1867," will include the following among other leading provisions:—The council will be empowered to provide, in or near the borough, "commodious courts, lodgings of her Majesty's judges, offices, lock-ups, and all other accommodations that may be necessary or convenient." The expenses are to be defrayed out of a special rate. A plan is generally approved by the committee which will entail an outlay of from 20,000*l.* to 25,000*l.* This plan is to buy up the lease of the Black Rock, the premises immediately adjoining the old townhall, and to build new premises on the site of both structures. As there are now police-offices contiguous, it is thought that the contemplated site will furnish space enough for all the necessary courts and offices. The judges' lodgings would be elsewhere.

TENDERS

For alterations at 164, Fenchurch-street, for Mr. Kino. Messrs. Young & Son, architects. Quantities supplied:—

Ellis	£1,323	0	0
Brass	1,257	0	0
Lark	1,234	0	0
Webb	1,208	0	0
Chessum	1,155	0	0
Henshaw	1,034	0	0
Newman & Mann	769	0	0

For the erection of two villa residences, Stoke Newington, for Mrs. Burdett. Mr. T. Hill, architect:—

Nash	£2,897	0	0
Patman & Fotheringham	2,575	0	0
Carter & Sons	2,530	0	0
Longmead	2,447	0	0
King & Sons (accepted)	2,360	0	0
Maclachlan	2,152	0	0

For farm buildings, Elmbridge Court, near Gloucester. Messrs. John Money & Son, architects:—

	Farm Buildings.			Water Supply.		
Teague	£1,498	0	0	£134	0	0
Jones & Sons	1,376	0	0	134	0	0
Clutterbuck	1,175	0	0	112	0	0

For Bristol City Hotel. Messrs. Foster & Wood, architects. Quantities supplied by Mr. J. A. Clark:—

Kirk	£49,100	0	0
Jackson & Shaw	48,250	0	0
Brass	47,829	0	0
Rigby	46,488	0	0
Baker	45,944	0	0
Call & Pethick	44,444	0	0
Warburton, Brothers	43,725	0	0

For alterations and additions to 533, Oxford-street, for Professor Holloway. Mr. J. Dale, architect:—

Carter & Sons	£1,080	0	0
King & Sons	894	0	0
Parsons (accepted)	750	0	0
Strudder	683	0	0

For the erection of new factory, Hill-street, for Messrs. Waterlow & Sons. Messrs. Lee & Beck, architects:—

Allen	£13,616	0	0
Ashby & Sons	12,194	0	0
Webb & Sons	12,125	0	0
Woodman	11,986	0	0
Conder	11,496	0	0
Perry & Co.	11,160	0	0
Browne & Robinson	11,096	0	0

For additional works at the House of Correction, Coldbath-fields. Mr. F. H. Pownall, architect:—

Sawyer	£11,149	0	0
Lovatt	11,071	0	0
Gibson, Brothers	10,880	0	0
Mansfield & Price	10,843	0	0
Webb & Sons	10,778	0	0
Eaton & Chapman	10,490	0	0
Mann	9,765	0	0
Henshaw	9,283	0	0

For sundry alterations to premises in Goodge-street and Charlotte-court, for Messrs. Winter & Co. Mr. W. A. Baker, architect. Quantities supplied by Messrs. Richardson & Waghorn:—

Scrivener & White	£1,222	0	0
Manley & Rogers	1,145	0	0
Kelley & Co.	997	0	0
Tracey & Co.	925	0	0
Moultrie	888	0	0

For sundry alterations to the Crown public-house, Cleveland-street, for Mr. Makepeace. Messrs. Lynes & Rivett, architects:—

Richards	£610	0	0
Ellis	566	0	0
Moultrie	552	0	0
Lawrence & Baugh	549	0	0
Hartland	473	0	0

For rebuilding Nos. 2 and 3, and alterations to No. 4, Finch-lane, City, for Mr. Alfred Purssell. Mr. Herbert Williams, architect. Quantities supplied by Mr. C. Reilly:—

Turner & Sons	£3,299	0	0
Barnsley & Sons	3,180	0	0
Ashby & Horner	2,890	0	0
Ashby & Sons	2,869	0	0
Conder	2,731	0	0
Newman & Mann (accepted)	2,637	0	0

TO CORRESPONDENTS.

G. W. F. (we have no particular *grate*. The servants should be mad to do as they are told).—E. W. S. (communicate with Editor of the *Builder*).—C. H. (in type).—E. A.—T. P.—J. A. K.—An Old Subscriber.—G. G.—A. & K.—W. T. C.—A. W. M.—T. W. T.—J. G.—W. M.—B. A.—C. J. R.—W. H. S.—J. F. L.—W. &.—W. W. & Son.—S. C. H.—F. B.—D. C. T.—G. J. H.—C. R.—F. M.—S. M.—G. F. C.—T. J. S.

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